REPORT OF THE
DEPARTMENT OF HEALTH PROFESSIONS

STUDY OF THE REGULATION OF ATHLETIC TRAINERS

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

SENATE DOCUMENT NO. 10

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Department of Health Professions

John W. Hasty
Director

6606 West Broad Street, Fourth Floor
Richmond, Virginia 23230-1717

http://www.dhp.state.va.us/
TEL (804) 662-9900
FAX (804) 662-9943
TDD (804) 662-7197

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TO: The Honorable James S. Gilmore, III
Governor of the Commonwealth of Virginia

The Members of the General Assembly of Virginia

It is our privilege to present this report which constitutes the response of the Board of Health Professions to the request contained in Senate Joint Resolution 122 of the 1998 Session of the General Assembly.

The report provides the findings of the Board from its Study of the Need to Regulate Athletic Trainers and its recommendation that regulation is necessary to ensure the health, safety and welfare of the citizens of the Commonwealth.

The Board acknowledges the work of members of the staff who conducted the research and prepared the final report.

John W. Hasty
Director
Department of Health Professions

Elizabeth A. Carter, Ph.D.
Deputy Executive Director
Board of Health Professions

Report on the Study of the Need to Regulate Athletic Trainers

In Response to SJR122

The Board of Health Professions
Commonwealth of Virginia

September, 1998

PREFACE

Senate Joint Resolution 122 (1998) requested the Board of Health Professions to conduct a study to determine whether athletic trainers should be regulated by the state and to determine the fiscal impact of such regulation.

The chief finding of the study is that unregulated athletic trainers may pose a significant risk to the health, safety, and welfare of minor athletes when performing tasks related to the recognition, evaluation, and immediate care of athletic injuries when no immediate, on-site supervision by a licensed health care provider is available.

The Board of Health Professions is comprised of seventeen members, with a representative from each of the health regulatory boards within the Department of Health professions and five at large citizen members. Staff for the project included Robert A. Nebiker, Executive Director for the Board, Elizabeth A. Carter, Ph.D., Deputy Executive Director for the Board, Elaine J. Yeatts, Senior Regulatory Analyst for the Department of Health Professions, and Board Administrative Assistants Terri H. Behr and Carol S. Stamey.

The members of the Board of Health Professions gratefully acknowledge the contributions of the members of the Regulatory Research Committee:

William M. York, Jr. (Committee Chair)
Isabelita M. Paler, R.N.
Delores C. Darnell, R.N.
Gary L. Pillow, Ed.D.
Timothy E. Clinton, L.P.C., Ed.D.
Janice S. Golec
Barbara A. Cebuhar (Ad Hoc Member)

Finally, the Board appreciates the efforts of Ann Maust, Ph.D. of Research Dimensions, Inc. to assist the Board in the development of new criticality scaling methods to assess the potential for harm to the public.

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EXECUTIVE SUMMARY

Background

Senate Joint Resolution 122 of the 1998 Legislative Session of the Virginia General Assembly requested the Board of Health Professions to conduct a study to determine whether athletic trainers should be regulated and, as part of the study, to determine the fiscal impact of such regulation.

SJR 122(1998) was patroned by the Honorable R. Edward Houck at the request of the Virginia Athletic Trainers Association. The chief concern prompting the study was that the role of the athletic trainer has become increasingly significant to the safety and well-being of an expanding number of physically active individuals, including minors. Although private credentialing exists, such certification is not mandatory, and athletic trainers who are not nationally certified may have no particular education or training qualifications. This lack of regulation may pose a threat to the public in that athletic trainers are often the first responders to injuries at sporting and training events and must often make immediate, independent judgments as to the severity of those injuries.

Methodology

To govern the conduct of the study, the Board employed the formal criteria and policies referenced in its publication *Policies and Procedures for the Evaluation of the Need to Regulate Health Occupations and Professions, 1998.* The methodology used included a review of the policy literature, of the current federal and state laws and regulations, of other states' disciplinary experiences, and of public comment. Also, it has been the Board's experience that anecdotal information is often plentiful, however, usually little objective information exists concerning the risk of harm posed by professions which are not state regulated. Given this, the Board has sought a more objective way to assess the *potential for harm* posed by the practice of athletic training. A newly developed research technique for sunrise review -- criticality scaling -- was instituted in this study. The criticality scaling methods employed assessed the risk of harm posed by incompetent performance of the tasks that an entry level nationally certified athletic trainer should be competent to perform. Also reviewed to evaluate potential risk was the available information concerning medical malpractice cases involving athletic trainers and the available information used by major malpractice insurance carriers to assess the risk of harm posed by a profession.

Literature Review

The literature review was divided into five areas: (1) What is an Athletic Trainer?, (2) States' Regulation, (3) Other Professional Groups, (4) Previous Board of Health Profession's Sunrise Reviews on Athletic Trainers, and (5) Current Issues.

The professional credentialing association of athletic trainers is the National Athletic Trainers Association (NATA). They define the role of the athletic trainer as "preventing, recognizing, managing and rehabilitating sports injuries." (NATA 1997, 1998). To obtain NATA certification, athletic trainers must fulfill requirements established by the National Athletic Trainers Association Board of Certification, Inc. (NATABOC) including its national credentialing examination.

The examination is comprised of five practice areas (i.e., content domains) resulting from the latest role delineation study conducted in 1995. The content domains are as follows: (1) prevention of athletic injuries, (2) recognition, evaluation and immediate care of athletic injuries, (3) rehabilitation and reconditioning of athletic injuries, (4) health care administration, and (5) education and counseling. Each of these content domains is broken down further into constituent tasks.[•]

Prior to being allowed to sit for the examination, national certification standards require that graduates of accredited programs complete their program within two years, complete at least 800 hours of athletic training experience, and receive their bachelors degree from the college or university where they completed their program. Those who have not completed an accredited program must complete additional supervised experience and meet specific course work requirements as detailed on page 5 of the report. Accredited programs exist at Old Dominion University, University of Virginia, and James Madison University.

Of particular note is that of the estimated 900 athletic trainers in Virginia, over 500 are NATA certified. However, there are no reliable statistics on the geographic distribution or practice type distribution for athletic trainers in Virginia.

Currently 37 states regulate athletic trainers to some degree. Each regulating state defines athletic trainers or athletic training in statute. Appendix 6 provides details.

[•] It is these content areas and specific tasks that were rated for potential for harm. See the report section entitled, Criticality Rating Methods and Results for further information.

Other professional groups exist which are related to but distinct from athletic trainers. They include professional trainers, fitness professionals, and special populations' trainers. Such complementary groups were excluded from the current study.

Athletic trainers have actively sought state regulation during the past fourteen years, and the Board of Health Professions conducted sunrise studies on three occasions, in 1984, 1986, and 1990. Each time, the Board determined that there was insufficient need for State regulation.

Since the 1990 Board study, certain issues have emerged regarding the environment in which athletic trainers practice which was considered by the current Board. For the general population overall participation in sports and other strenuous activity has increased substantially. This is true particularly for minors, women, seniors, and special needs athletes.

Children and adolescents posed a particular concern for the Board because of their vulnerability due to their minor status. Currently, it is estimated that 35 million minors (6 to 21 years) participate in sports in the United States. This figure is up from 20 million in 1991. Sports injuries account for the second largest health care expenditure for injuries in this age group. Injury rates for girls are estimated between 20 to 22% for girls and 39% for boys per season. The growing involvement of children in organized sports and fitness activities has been accompanied by not only increased numbers but by new types of injuries, particularly musculoskeletal in training situations.

Empirical Evidence

The empirical evidence examined by the Board included disciplinary data from other states that regulate athletic trainers, criticality rating results, malpractice insurance information, and actuarial prediction data sources.

Disciplinary data for 1996 and 1997 was gleaned from 36 of the 37 regulating states. North Carolina was excluded because it has just begun to regulate athletic trainers this year. Page 10 details the results of the Board's survey. Twenty-three states (63.8%) responded. Twelve states (52.1% of responders) indicated that they had taken no disciplinary action during the two years surveyed. However, Illinois, Ohio, and New Mexico reported double-digit complaints and disciplinary action. Across states, the prevailing cause for action was unlicensed activity. However, New Jersey reported discipline for a case of substance abuse.

From several analyses of the criticality ratings, several consistent findings resulted. [•] A panel of experts judged the likelihood of various types of injuries resulting from the practice of athletic training practice to be significantly higher for the "incompetent"(i.e., uncertified) vs. "competent" (i.e., nationally certified) athletic trainer. For example, when the results for all content domains were combined, the probability of a severe injury resulting from an "incompetent" athletic trainer's practice was judged to be 8 times more likely than that resulting from a "competent" trainer. When examining the results of individual Domains, the panel judged the largest probability for harm to occur in Domain 2 – Recognition and Evaluation of Immediate Care Tasks. Here the "incompetent" trainer is viewed as being 7 times more likely to inflict minor injury (54% vs. 8%), 9 times more likely to inflict severe injury (27% vs. 3%), and 8 times more likely to inflict serious injury or death (8% vs. 1%) than the "competent" trainer. When examining individual tasks within Domain 2, it was clear that tasks which require the application of judgment, life threatening situations or death were judged to be 10 to 20 times more likely for the "incompetent" vs. "competent" athletic trainer.

Under current law there is no requirement for athletic trainers to carry liability insurance. However, athletic trainers may obtain individual liability coverage; some may obtain limited group coverage for a limited scope of duties. Actual data on specific claims in Virginia from 1990 forward was sought but was deemed to be proprietary by the insurance carriers. However, the Virginia Athletic Trainers' Association was able to obtain national claims status data from injuries incurred from 1990 forward. OF 39 claims, 11 resulted in payment. The largest disbursement was for $45,717 while the smallest was for $622. Also included in the data obtained by the Virginia Athletic Trainers' Association is a sample description of loss for open claims.

Part of the current study's requirement is a discussion of the fiscal impact that regulation of this group may pose. Absent reliable information on the geographical and employment type distribution of athletic trainers in Virginia, a straightforward empirical assessment of fiscal impact was not deemed practical.

However, in an attempt to afford the Board with an actuary's insight into how to economically quantify risk of harm to the consumer posed by a particular profession, the Board secured the services of an actuary. For the current study, the most salient excerpts from his report are provided in Appendix 10. It is clear from his analysis that the available data on risk assessment are not tailored to specific

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[•] The use of criticality scaling to provide empirical evidence for sunrise review is groundbreaking in this study. Because of this, the report goes into some detail regarding the specific methodology employed and a critique of the same. The detailed findings are outlined on pages 11 through 15 of the report and in Appendix 8.

professions, but must be expertly extrapolated from a variety of sources to obtain a useful picture of the risk landscape relevant to the profession in question. Further exploration of this method of assessment was advocated.

Both oral and written public comment was received. Appendix 11 contains the written comment and a summary of speakers' comments.

Recommendations

The Board's Regulatory Research Committee met on September 14, 1998 and considered a broad range of policy options resulting from its analysis of the research presented. The options discussed included required licensure, mandatory certification, registration, and no change in the status quo. The following recommendations of the Regulatory Research Committee were adopted by the full Board of September 15, 1998, with the Board's bolded modifications:

- To ensure that the public is not mislead by titling, the title "Athletic Trainer," "Athletic Trainer Assistant," or "Trainer" should be restricted through statutory certification to those who are certified by the National Athletic Trainers Association. No restriction should be placed on the scope of practice of other state regulated health care providers. **The title "Athletic Trainer" is to be reserved to those adequately trained.**
- Certification should be mandatory for those individuals who engage in the tasks in Domain #2 – Recognition, Evaluation and Immediate Care of Athletic Injuries (see Appendix 5), who do not have immediate, direct, on-site supervision of a licensed health care provider, and who provide athletic training to minors 21 years of age and younger. **No restrictions should be placed on the practice of other regulated health care providers provided that they are practicing within the scope of their professional license.**
- **The Board of Medicine should be considered as the appropriate Board to regulate athletic trainers.**
- **The regulating Board should have the discretion to vary from NATA or NATABOC in setting educational, examination, and experience requirements for entry.**
- A modified grandfather clause should provide a period of one year for individuals who are not currently nationally certified to meet the national certification requirements. Such persons must first have a bachelors degree in athletic training from a NATA accredited program. **The modified grandfather provision should incorporate the requirements for educational experience explained in the report section "What is an athletic trainer?" on pages 4 and 5. Further, the determination of what constitutes meeting those requirements should be a matter for the regulating Board to resolve.**

VIRGINIA BOARD OF HEALTH PROFESSIONS
DEPARTMENT OF HEALTH PROFESSIONS

STUDY OF THE NEED TO REGULATE ATHLETIC TRAINERS

Background

Senate Joint Resolution SJR 122 of the 1998 Legislative Session of the Virginia General Assembly requested the Board of Health Professions to conduct a study to determine whether athletic trainers should be regulated and, as part of the study, to determine the fiscal impact of such regulation (see Appendix 1).

Athletic trainers currently provide health care assistance to athletes and other physically active individuals of all ages in a wide variety of settings, including schools and colleges, professional teams, businesses, and medical clinics. Although their work is frequently supervised by physical therapists, physicians, or other regulated health care providers and although injury prevention is a major focus for this profession, often athletic trainers are the first to provide health care assistance when sports injuries occur, including those involving minors. As such, they routinely make independent decisions as to the severity of injuries, provide first aid, and determine whether medical referral is necessary.

Methodology

Scope

The general scope of this study is described in Appendix 2. It entails a thorough review of the competencies and standards for practice for athletic trainers in the Commonwealth and other jurisdictions to provide answers to the following questions:

- What is the potential risk for harm to the consumer?
- What specialized skills and training do athletic trainers possess?
- To what degree is independent judgment required in their practices?
- Is their scope of practice distinguishable from other regulated occupations or professions?
- What would be the economic impact to the public if this group were regulated?
- Are there alternatives other than state regulation of this profession which would adequately protect the public? If not, what is the least restrictive level that is consistent with the protection of the public's health, safety, and welfare?

The Criteria

To govern the conduct of the study, the Board employed the formal criteria and policies referenced in its publication, *Policies and Procedures for the Evaluation of the Need to Regulate Health Occupations and Professions, 1998.* Along with a review of the relevant policy literature and of current laws and regulations, public comment was obtained. Based upon the data derived from these sources, the seven formal criteria (the Criteria) were applied. They are as follows: 1) risk of harm to the consumer, 2) specialized skill and training, 3) autonomous practice, 4) scope of practice, 5) economic impact, 6) alternatives to regulation, and 7) least restrictive regulation. Appendix 3 details each. Among other things, the Criteria seek to assess the degree of risk from unregulated practice, the costs and benefits of the various levels of regulation, and the advantages and disadvantages of the various alternatives to regulation that may protect the public.

New Procedures

In applying the Criteria, the Board employed new, more empirically evidence-based procedures that sought to assess the risk of harm specifically posed by the unregulated profession. In the past, to assess risk of harm, the Board largely relied on the usually limited disciplinary data available from other jurisdictions and anecdotal reports of consumer problems. However, given the limited base of verifiable information, attribution of the problems to a lack of regulation of a profession, per se, becomes questionable. This understood, the Board has often had to focus its attention on *potential* for harm rather than real harm. Heretofore, it has had no systematic way to review potential for harm.

To obtain evidence that more directly points to the practice of the profession, itself, and its *potential* for harm, the Board also considered two new evidence sources. First, it employed the latest professionally conducted job analysis (role delineation study) to obtain the actual tasks involved in the practice of athletic training. Second, the Board sought review available malpractice information to include not only case decisions but also the bases used for actuarial malpractice risk predictions. Both data speak to the issues germane to several of the criteria, particularly potential for harm, and the later, more specifically, to actual harm. However, limited national data on malpractice claims were all that were practically obtainable within the timeframe and budget of the current study.

Criticality Measurement with Review of the Role Delineation Study

To appropriately employ the Criteria, the Board had to have a complete understanding of what comprises the practice of athletic training, including the necessary educational and training background required for entry level competency. To that end, the Board reviewed the most recent role delineation study of athletic trainers which was published in 1995 in conjunction with the National Athletic Trainers Association. The results of this study served as the basis for its private national certifying examination measuring entry level competency (National Athletic Trainers Association Board of Certification, Inc. and Columbia Assessment Services 1995). From an analysis of the specific tasks which comprise athletic training, the Board created its own measures of criticality (or importance). These measures were used to assess athletic trainers' practice on the first Criterion, Risk for Harm to the Consumer.

To collect data on criticality, a panel of experts was asked to judge all tasks across content areas (domains), using Likert-type scales detailed in a later section of this report entitled, "Criticality Rating Methods and Results" on page 11.

Malpractice Information

The second source of information specifically on harm or potential for harm was sought from a review of actual medical malpractice cases and from information provided by major malpractice insurance carriers for athletic trainers as to the rationale they use for making actuarial risks predictions for the profession. Although this information is viewed as highly proprietary by its sources, the Board attempted to gather as many details as possible.

The literature review, criticality scores, malpractice insurance risk assessment, and public comment served as the evidentiary basis to answer the study's questions. These results formed the basis for the study report and recommendations.

Literature Review

The literature on athletic training is extensive in clinical and practice areas but rather sparse in regulatory policy reviews that are germane to the current study. The policy literature that is available focuses on defining what it means to be an athletic trainer, including the educational and training requirements for national certification and regulation by the various states. Other policy pieces include the previous sunrise reviews conducted by the Board as well as some articles on current "issues" for the profession. Such issues include trends in sports and sports medicine, for example the athletic trainer's

role in meeting the challenges of increased participation by females, seniors, and younger athletes and those with special needs.

What is an Athletic Trainer?

Before approaching the issues relevant to application of the Criteria, it was necessary to first clearly define the subject of the study. In other words, what defines an athletic trainer?

Over the past half century, the profession of athletic training has emerged from individual locker room attendants and coaches with some skill in taping and massaging to a highly organized professional group with national certification requirements for advanced education and credentialing. They are found in a variety of work settings: secondary schools, colleges and universities, professional sports teams, and in sports medicine clinics. In 1991, the American Medical Association acknowledged this group as an allied health profession (Gersten & Lopez, 1996; National Athletic Trainers Association, 1997). In 1994, the Commission on Accreditation of Allied Health Education Programs (CAAHEP), a nationally recognized credentialing body began endorsing athletic trainer programs. See Appendix 4 for the Criteria for Recognition of Allied Health Occupations employed by CAAHEP (CAAHEP, 1998).

The National Athletic Trainers Association (NATA) is legally considered *the* professional credentialing association for athletic trainers, currently (Gersten & Lopez, 1996; NATA, 1997,1998). On its website and other publications, NATA describes the role of the athletic trainer as "preventing, recognizing, managing and rehabilitating sports injuries." To obtain NATA certification, athletic trainers must fulfill the requirements for certification established by the National Athletic Trainers' Association Board of Certification, Inc. (NATABOC) including its national examination. Based on a role delineation study published by NATABOC in 1995, this examination is comprised of five practice areas (content domains): (1) prevention of athletic injuries; (2) recognition, evaluation and immediate care of athletic injuries; (3) rehabilitation and reconditioning of athletic injuries; (4) health care administration; and (5) education and counseling. Each of these content domains is further broken down into constituent tasks. A listing of the specific tasks by respective content domain is provided in Appendix 5. It is this listing of tasks which formed the basis of the Board's Criteria assessment of criticality for the profession.

Nearly 100 institutions across the country offer undergraduate or graduate coursework in athletic training accredited by NATA or by CAAHEP. Virginia currently has three

CAAHEP accredited programs: Old Dominion University, University of Virginia, and James Madison University. Accredited entry-level programs must include formal instruction in the following areas:

- athletic injury/illness prevention and evaluation,
- first aid and emergency care,
- therapeutic modalities and exercise,
- athletic training program administration,
- human anatomy and physiology,
- exercise physiology,
- kinesiology/biomechanics,
- nutrition,
- psychology,
- personal and community health, and
- instructional methods.

Graduates from the accredited programs must complete their program within two years, complete at least 800 hours of athletic training experience which is supervised by a certified athletic trainer from the program, and receive their bachelors degree from the college or university where they completed their program. Those applicants who have not completed an accredited program who wish to sit for the NATABOC examination may do so if they successfully complete an internship program that meets the following qualifications:

- Successful completion of 1,500 hours or more of certified athletic trainer supervised athletic training experience;
- Completion of the internship in at least two but no more than five years;
- Completion of at least 1,000 of the required 1,500 in interscholastic, intercollegiate, or professional sports (remaining 500 hours may be completed in a clinic or sports camp);
- Completion of at least one credit course in health, human anatomy, kinesiology/biomechanics, human physiology, exercise physiology, basic athletic training, and advanced athletic training;
- A bachelors degree from their program's college or university.

(Commission on Accreditation of Allied Health Education Programs, 1997; NATA, 1997).

It should be noted that of the estimated 900 athletic trainers in Virginia, over 500 are NATA certified. ***However, there are no reliable statistics on the geographic distribution of athletic trainers in Virginia.*** *No current figures are available which indicate their availability in which types of practice settings (high school, collegiate, professional teams, medical clinics, etc.)*

States' Regulation

Currently, there are no federal statutes or regulations which govern the profession. And in Virginia, there are no state statutory standards for athletic trainers' practice or for their supervision by employers. Currently, 37 states regulate athletic trainers in some manner. The types of regulation imposed by the various jurisdictions range from simple exemption from other health professions' licensure requirements to registration, certification, or licensure. The regulating states provide in statute their own definitions of athletic trainers and/or training (see Appendix 6).

Other Professional Groups

Before leaving the definitions, it should be noted that there are myriad professional groups related to but different from athletic trainers. Some of these organizations promote their own private certifications and continuing education for other sports and sports medicine groups, as well. For example, certificates may be obtained in such areas as "personal training," "post rehabilitation exercise," "cycle instructing, senior fitness," "children's fitness, aerobics," "strength, nutrition consulting," "aquatics instructing," "pre-/post-natal exercise consulting," and "special populations training." The American Fitness Professionals and Associates group offers certifications and continuing education workshops for the following affiliate groups: National Academy of Sports Medicine, American College of Sports Medicine, National Strength and Conditioning Association, American Council on Exercise, National Sports Performance Association, Aerobic and Fitness Association of America, Senior Fitness Association of America, as well as the National Athletic Trainers Association (American Fitness Professionals and Associates, 1998). Even though athletic trainers may participate in and benefit professionally from such programs. Non-athletic trainer participants in these groups are not the focus of the current study. Athletic trainers are viewed as complemented by, but distinct from, these affiliations.

Previous BHP Sunrise Reviews on Athletic Trainers

Athletic trainers have actively sought state regulation in the Commonwealth through review by the Board of Health Profession on three occasions during the last fourteen years.

- In 1984, the Board (formerly Commission of Health Regulatory Boards) recommended against State *licensure* of athletic trainers.

- In 1986, based upon a comprehensive review of the regulation of physical rehabilitative occupations and professions, the Board (formerly Council on Health Regulatory Boards) concluded there was insufficient need demonstrated for any State regulation.
- In 1990, independent of any larger initiative to examine the need to regulate related occupations and professions, the Board studied the matter with a focus on the need for *statutory certification* rather than licensure. The Board reaffirmed the 1986 determination that State regulation of athletic trainers was not warranted at the time. The rationale provided was that while risk for harm by the unregulated profession existed, it was not sufficiently demonstrated that the risk was due to the lack of regulation, per se. (Virginia Board of Health Professions, 1990; 1987).

Current Issues

Since the 1990 Board study, certain issues have emerged regarding the environment in which athletic trainers practice which was considered by the current Board. Participation in sports and other strenuous physical activity has increased substantially for the population as a whole, and particularly for minors, women, seniors, and special needs athletes. Competency in addressing the special requirements of the various types of physically active participants is essential to performing the current role of athletic trainer.

The athletic training literature is replete with general athletic health and professional issues, statistics on types of injuries, and the latest techniques for injury repair and prevention (see Blair, 1996; Brandon & Lamboni, 1996; Cormier, York, Domholdt, & Kegerreis, 1993; Culpeper & Neimann, 1987; Gertsen & Lopez, 1996; Lephart, 1991; Magee & McFarland, 1996; McCoy, Dec & McKeag, 1994; Rich, 1994; and Saal, 1991). Such detail goes beyond the scope of the current study and will not be discussed further, with the exception of the issues relating to the minor athlete.

Children and adolescents pose a particular concern because of vulnerability due to their minor status. Currently, it is estimated that over 35 million children, adolescents, and young adults between the ages of 6 and 21 years participate in sports in the United States. In 1991, that figure was approximately 20 million. Sports injuries now account for the second largest health care expenditure for injuries in this age group (Bernhardt & Landry, 1995). The growing involvement of children in organized sports and fitness activities has been accompanied by increased numbers, and in some cases, new types of injuries, particularly in training situations. Injury rates in children and adolescents playing organized sports are estimated at between 20 to 22% for girls and 39% for boys per season. Among the causes for these injuries, inadequate pre-participation physical examinations, training errors, poorly trained coaches, playing while injured or overtired,

declining fitness levels of children, improper nutrition, psychological stress, and limited awareness about the risks of participation have been noted (Quedenfeld, 1993). It has also been reported that adolescent female athletes face a special risk for musculoskeletal injuries related to structural development. Disordered eating (i.e., anorexia, bulimia), amenorrhea, and osteoporosis, known as the "female triad" may contribute significantly to stress fractures and future skeletal disorders (Skolnick, 1998; Timmerman, 1996).

Since the 1990 Board athletic trainer study, there has been an advent of greater participation in sports and other strenuous physical activities. This includes the groups mentioned that, heretofore, were not particularly active in sports. With this trend came a greater potential for injury, and a greater need for understanding their particular needs. This is especially important in minors who have little understanding of the implications of injuries.

It is clear that adequate injury prevention, oversight, and rehabilitation have become more salient issues since the previous Board study. Empirical information about potential and actual harm updated since 1990 follows.

Empirical Evidence

The remainder of the report focuses on empirically derived information and sources of prediction information – actual disciplinary data from other states, the new criticality measures on potential harm, and malpractice data and actuarial projection sources. These sources of information as well as the literature review and information provided through public comment and Board member concern formed the basis for the policy recommendations to be offered by the Regulatory Research Committee and adopted in modified form by the full Board.

Disciplinary Data from Other States

To assist the Board in determining the risk of harm posed by athletic trainers, actual disciplinary data from the states currently regulating this profession was surveyed. (See Appendix 7.) The survey requested the following information:

- the number of athletic trainers currently regulated,
- the year regulation began;
- the number of complaints received and the number of disciplinary actions taken in fiscal year 1996 and 1997;
- and for each year, a percentage breakdown by type of offence for which disciplinary action was taken.

The types of offences listed were: substandard care, fraud/false advertising, substance abuse, unprofessional conduct, and "other."

To obtain data consistently for comparison purposes across all of the surveyed states, only two fiscal years were surveyed, 1996 and 1997. The survey was sent to 36 of the 37 regulating states; North Carolina was excluded because it just began its licensing program in 1998.

With 23 states returning surveys, a response rate of 63.8% was obtained. The results are delineated in the table, "Athletic Training Study – 1998 – Survey of State Discipline" on the following page.

Twelve of the states (52.1%) reported that they had received no complaints or had taken no disciplinary actions during the 1996-1997 period.

ATHLETIC TRAINING STUDY - 1998 - SURVEY OF STATE DISCIPLINE

State	How many Regulated?	Year 1st Reg.	1997 Complaints	1997 Discipline	1997 Offense	1996 Complaints	1996 Discipline	1996 Offense
DE	90	1991	1	0	N/A	0	0	N/A
FL	693/137(in)	1995	0	0	N/A	0	0	N/A
ID	109	1989	0	0	N/A	0	0	N/A
IL	817	1985	20	17	N/A	17	9	N/A
IA	165	1995	0	0	N/A	0	0	N/A
KS	180	1996	0	0	N/A	0	0	N/A
KY	362	1979	0	0	N/A	0	0	N/A
ME	75	1995	1	Pending	Pending	0	0	N/A
MN	305	1993	1	0	--	0	0	N/A
MS	153	1992	0	0	N/A	0	0	N/A
MO	200	1983	3	2	Unlicnsd. activity	2	2	Unlicnsd. activity
NE	140	1987	0	0	N/A	0	0	N/A
NH	25	1996	0	0	N/A	0	0	N/A
NJ**	750	1989	1	0	Substance abuse	0	0	N/A
NM	90	1981	11	11	Unlicnsd. activity	4	4	Unlicnsd. activity
NY	245	1997	2	0	N/A	N/A	N/A	N/A
OH	1,159	1991	8	0	Unlicnsd. activity	20	5	Unlicnsd. activity
PA	1,454	1984	0	0	N/A	0	0	N/A
RI	90	1983	0	0	N/A	0	0	N/A
SC	209	1984	0	0	N/A	0	0	N/A
SD	71	1984	0	0	N/A	0	0	N/A
TX	1,336	1971	4	0	N/A	6	1	False app. Info.
WV*	>100	—						

* Localities regulate. No knowledge of problems, except shortage of athletic trainers

** Recurrent problem is that statute does not permit temporary registration, and some athletic trainers begin work prior to the registration being completed.

23 of 36 Surveyed States Responding (63.8%)

Of the remaining states, Illinois, Ohio, and New Mexico reported the highest numbers of complaints and discipline -- in the double digits. When averaging the number of complaints over the two-year period, the ratio of complaints to total number of licensees was approximately 2.2% in Illinois, 2.4% in Ohio, and 8.3% in New Mexico. For disciplinary action, the ratio was 1.5% for Illinois, 0.2% for Ohio, and 0.8% for New Mexico.

Across states, unlicensed activity was reported as the prevailing cause for action. However, New Jersey reported one case of discipline for substance abuse.

Criticality Rating Methods and Results

Given that the Board had no prior history in the actual development and implementation of the criticality rating scales, the services of Ann Parker Maust, Ph.D. (Research Dimensions, Inc.) and James Fortune, Ph.D. (Virginia Polytechnic Institute and State University) were retained. Both have had extensive experience in the development, administration, and evaluation of assessment devices. Further, Dr. Fortune has published extensively on matters relating to professional regulation. Appendix 8 contains the report of their efforts detailing the research methodology employed; analysis of results; and observations, conclusions and suggestions. The following provides a summary of that report.

Research Methodology Employed

A measurement approach was defined which included the development and reliability and validity assessment of an evaluation instrument to assess risk of harm based on the *tasks* contained in the latest role delineation study. As in the NATABOC (1995) role delineation study, the tasks were grouped according to five content domains described (see page 4). Two scales, described below, were initially envisioned, one to assess "Extent of Harm" and the other to assess "Likelihood of Occurrence."

Extent of Harm

1. *No Loss, Inconvenience, or Injury*
2. *Loss or Inconvenience, but No Injury*
3. *Minor Injury*
4. *Debilitating Injury*
5. *Severe Injury Resulting in Loss of Permanent Significant Function*
6. *Life Threatening Injury*
7. *Death*

Likelihood of Occurrence

1. *Less than 1%*
2. *1% to 25%*
3. *26% to 50%*
4. *51% to 75%*
5. *76% to 99%*
6. *More than 99%*

A panel of experts was assembled to conduct the actual criticality ratings and provide insight on how the evaluation process could be strengthened, including their evaluation of the effectiveness and validity of the instrument. Appendix C of the consultants' report provides a listing of the participants. In addition to athletic trainers, the committee was comprised of a physical therapist, orthopedic surgeon, and a physician specializing in emergency medicine.

The panel first attempted to rate the tasks under two different sets of instruction. The first presumed unlicensed conditions; the second presumed licensed conditions.

The consensus of the panel was that they had several concerns: the need for a consistent definition of "athletic trainer," the need for modification to the scales, and their desire to use tasks rather than full accident or injury scenarios.

The lack of a consistent definition of "athletic trainer" troubled some of the panel. They explained that their responses would vary depending upon the definition because there are athletic trainers with little or no training practicing while others have extensive training and national certification. To accommodate this concern, the panel was instructed to complete the ratings considering the worst case scenario—the incompetent trainer who is both uncertified and untrained. Then they were asked to complete the same questionnaire considering the best case scenario – the competent athletic trainer who is both trained and certified.

Concern over scaling was also voiced. Their primary issues focused on having to rate on the "extent of harm" scale that every task conceivably could result in major injury or death and then having to rate consistently low on that such an extreme harm would occur. They also noted that the categories in the "likelihood of occurrence" scale lacked sufficient precision; their specific concern was with the 1%-25% range, when a large portion of their responses were in the 0-5% or 6-10% range. Another concern was the number of "extent of harm" categories. The potential for harm was judged to exist for each task, but the harm could be collapsed into three basic categories: 1) minor, including physical or psychological injury or financial loss, 2) severe, including debilitating injury, and 3) life threatening or death.

To accommodate these concerns, the questionnaire was revised and completed separately under the two sets of definitions/conditions (i.e., incompetent and competent) and by using an alternative 1-100 % probability scale. Each "extent of harm" response category was rated according to its specific probability of occurrence (i.e., 3%) rather than within the scale's ranges. Another suggestion make by the panel was that raters assign a

probability of occurrence to each of the three collapsed "extent of harm" categories and that these probabilities add up to 100%.

The panel also voiced the opinion that they would have preferred to conduct these rating employing specific injury or accident scenarios rather than tasks. It was explained that the use of the task-based system was recommended for two reasons. First, the tasks and their domains had been thoroughly researched and tested by NATABOC, Inc. (1995) as defining entry level practice for athletic trainers across settings. Second, the number of injury incidents/accident situations sufficient to encompass a proper sampling of athletic trainer practice was considered too large and complex, with too little time in the current study to adequately address them.

Analysis of Results

Several analyses were performed. The probability of the various types of injuries occurring when specific tasks are performed, weighted by frequency of task performance, was calculated which compares the results for "competent" vs. "incompetent" athletic trainer. Also, a calculation of a coefficient to determine the reliability of the measure across the panel of eight raters was completed.

The results of the analyses are contained in the several tables in the consultants' report found in Appendix 8. Shown below is a table from the consultants' report which provides a breakdown by Task Domain and All Tasks Combined.

Likelihood of Various Types of Injuries Occurring When Tasks Are Performed by Incompetent vs. Competent Athletic Trainers: By Task Domain and By All Task Domains Combined

Domain	Types of Injuries					
	Minor		Severe		Life Threatening	
	Uncertified	Certified	Uncertified	Certified	Uncertified	Certified
Domain 1: Prevention of Injury Tasks	45%	8%	15%	3%	4%	1%
Domain 2: Recognition, Evaluation and Immediate Care Tasks	54%	8%	27%	3%	8%	1%
Domain 3: Rehabilitation and Reconditioning Tasks	54%	6%	19%	2%	3%	1%
Domain 4: Health Care Administration	33%	4%	12%	2%	1%	1%
Domain 5: Professional Development	27%	5%	6%	1%	1%	1%
ALL DOMAINS	**42%**	**6%**	**16%**	**2%**	**3%**	**1%**

From this table, it is clear that the panel judged the likelihood of various types of injuries resulting from practice as being significantly higher for the "incompetent" (i.e., uncertified) individual than for the "competent" (i.e., certified) individual. When all task domains are combined, the probability of a minor resulting injury was viewed as being 7 times more likely (42% vs. 6%) for the "incompetent" than "competent" individual. The ratio was 8 times higher (16% vs. 2%) for severe injury resulting. Life threatening injury or death was judged to be 3 times as likely (3% vs. 1%) for the "incompetent" individual than for the "competent" one.

When examining the Task Domains individually, the panel judged the largest probability for harm to occur in Domain 2 – Recognition and Evaluation of Immediate Care Tasks. Here the "incompetent" trainer is viewed as being approximately 7 times more likely to inflict minor injury (54% vs. 8%), 9 times more likely to inflict severe injury (27% vs. 3%), and 8 times more likely to inflict serious injury or death (8% vs. 1%) than the "competent" trainer.

Analysis of Individual Tasks within Domains revealed some dramatic differences when comparing the "incompetent" with the "competent" athletic trainer. For example, in tasks which require the application of judgment within Domain 2, life threatening situations or death are judged to be 10 to 20 times more likely in the "incompetent" versus "competent" athletic trainer. These tasks included determining the course of action, administering first aid, and selecting and applying emergency equipment. Large ratios also exist for minor to severe injuries and are detailed in Appendix 8 (i.e., page 8, Appendix E of the consultants' report).

After statistically accounting for a small sample (n=8), the reliability coefficient of the measure was determined to be 0.70 which was judged to be a good inter-rater reliability given the diversity in backgrounds of the raters. Specifics on the calculation methodology are outlined in the consultants' report in Appendix 8.

Observations, Conclusions, and Suggestions

The consultants noted that this initiative was "ground breaking" in its attempt to measure extent of harm from practice of a profession. They viewed the instrument as appropriate to discriminate between competent and incompetent individuals in terms of the likelihood of a variety of injuries resulting from task performance. They also noted several improvements to the instrument and other considerations for the Board for the future.

The suggested improvements to the administration of the instrument relate to tighter definitions of "competent" vs. "incompetent" individuals, the need for separation of discussion and administration of the instrument and inclusion of a broader population of professionals with ratings from "uncertified" as well as "certified" individuals. These efforts should further establish the reliability of the instrument.

As discussed earlier, the consultants noted that task- rather than accident-based scenarios provide for a better focus to draw together different backgrounds and possibly result in a more valid instrument. However, to the degree possible, the consultants advocate further discussion in the field and medical community on whether and how to incorporate accident based scenarios in future criticality ratings.

Finally, given that the panel repeatedly noted a greater likelihood of harm resulting from the uncertified (i.e., "incompetent") athletic trainers' practice, the consultants noted that it would be helpful to have a better understanding of how many uncertified individuals are practicing in the Commonwealth and under what circumstances.

Malpractice Insurance

Under current laws there is no requirement for athletic trainers to carry liability insurance. However, athletic trainers may obtain individual liability coverage. Some may also obtain limited group coverage, although it is not tailored to cover all the risks associated with the current scope of duties for many athletic trainers. For example, some exclude coverage for rehabilitation activities.

McGuinness and Associates of Chicago is the primary insurer for individual athletic trainers. Liability limits are $1 million per claim and $3 million total. The cost to the individual athletic trainer per policy is approximately $400 annually.

While individual coverage is broad enough to accommodate the activities of athletic trainers, the availability of group insurance coverage obtainable through a professional association or employer is limited and can be expensive. For example, the National Educational Association insures teachers who also happen to be athletic trainers but does not provide coverage for claims beyond those associated with first aid. Currently, athletic trainers do not qualify for additional coverage for rehabilitation related injuries because such coverage is restricted to licensed health professionals. For those who do qualify, the cost of the additional coverage averages $360-380 per year.

Some localities and sports teams offer liability insurance for athletic trainers, some with limits of $2 million per claim and $4 million total. Other localities offer nothing or only limited coverage.

Actual data on specific claims in Virginia from 1990 forward was sought but was deemed to be proprietary by the insurance companies. However, the Virginia Athletic Trainers' Association was able to obtain national claims status data from injuries incurred from 1990 forward. Appendix 9 provides the data on claims from members of the National Athletic Trainers Association. The first page provides information on 39 claims made from March 20, 1990 to October 18, 1997. Eleven claims resulted in payment. The largest disbursement was for $45,717, while the smallest was for $622. Additional information about the specifics of the claims is unavailable. However, also included in the data obtained by the Virginia Athletic Trainers' Association is a sample description of loss for open claims.

Actuarial Prediction Data Sources

Part of the current study's requirement is a discussion of the fiscal impact that regulation of this group may pose. Absent reliable information on the geographical and employment type distribution of athletic trainers in Virginia, a straightforward empirical assessment of fiscal impact is not practical. This said, to afford the Board with an actuary's insight into how to economically quantify risk of harm to the consumer posed by a particular profession, the services of Senior Actuary P. Anthony Hammond, ASA, MAAA were secured. His report *Quantifying the Risk of Harm to Consumers of various Health Professions: Formula, Data and Practical Scaling Methods* is seminal both within the actuary and health profession regulatory arenas. His report was completed on August 20, 1998, and given the current study's deadline, the methodology he advocates could not be applied. Nevertheless, information within his report was reviewed by the Board and viewed as useful for future reviews in that it provides a "roadmap" for exploration into potential fiscal impact relating to risk of harm for future studies.

One particularly salient finding is found in "Sources of Data for Quantifying the Risk of Harm to Consumers" (Appendix 10). This is an excerpt from Mr. Hammond's larger report. It is clear from his analysis that the available data on risk assessment are not necessarily tailored to specific professions, but must be expertly extrapolated from a variety of sources to obtain a useful picture of the risk landscape relevant to the profession in question. Further development of this data source should be explored.

Public Comment

The timeframe of the study did not afford the opportunity for a formal public hearing. However, ample opportunity for comment was afforded interested parties throughout the study. But, in particular, a draft of the report was sent to all interested parties for public comment in advance of the Regulatory Research Committee on September 14, 1998. Both oral and written comment was received at the Committee meeting on September 14 and at the full Board meeting on September 15, 1998. Appendix 11 contains the written comment and a summary of speakers' comments presented at Committee and Full Board meetings.

Policy Options

For the Committee's September 14 meeting, a copy of the *Policies and Procedures for the Evaluation of the Need to Regulate Health Occupations and Professions* (the *Policies*) was provided. The Criteria are included in the *Policies* and are also found in Appendix 3 of the current report. The *Policies* delineates the guiding philosophy and evaluation standards to be employed. A copy is available upon request to the Board of Health Professions at (804) 662-7013.

The Committee considered a broad range of policy options. The following listing was not viewed as exhaustive but provided a framework for the Committee's initial deliberations. Final recommendations of the Board were reserved until all public comment had been received.

Licensure Should be Required to Practice as an Athletic Trainer

Licensure is the most restrictive level of professional regulation as it accords a monopoly upon a profession whose practice is well defined. Required licensure is the appropriate option if the Committee contends the following:

- There is a high potential for risk of harm to the public attributable to the nature of the practice.
- The skill and training required to safely practice is highly specialized and accredited through post-secondary education and clinical proficiency is certified by an accrediting body.
- Practice is largely independent, with little or no supervision
- The scope of practice must be definable in enforceable legal terms
- All six of the Criteria must apply.

It should be noted that when compared with the other options, the cost of licensure is high because it restricts the labor pool. However, public safety concerns may be viewed as outweighing financial considerations. Little is known about the distribution of the approximately 900 athletic trainers stipulated in HJR 122(1998). However, it is know that over 500 currently meet NATA standards. It is hoped that public comment, particularly from the school systems, may provide additional information.

Statutory Certification Should be Mandated to Restrict the Use of the Title "Athletic Trainer" to Those Adequately Trained

Statutory certification merely protects the profession's title. No scope of practice is reserved to the group. However, legal use of the title "athletic trainer" would be conferred only those individuals who meet the state's certification standards, defined in terms of education and minimum competencies. Required statutory certification is the appropriate option if the Committee can argue the following:

- There is a moderate potential risk to the public that is attributable to the nature of practice, client vulnerability, or practice setting and level of supervision.
- The level of skill and training required to practice safely can be differentiated from ordinary work. The candidate must have successfully completed education and/or experience requirements that are certified by a recognized accrediting body.
- There is some independence in practice, but the majority or practice actions are directed or supervised by others.
- The scope of practice is definable, but not enforceable in legal terms.
- The following Criterion 1 (risk of harm), 2 (specialized skill & training), 4 (scope of practice), 5 (economic impact), and 6 (alternatives) must be met.

The cost of regulating with statutory certification is variable depending upon how restricted the supply of practitioners is. As mentioned previously it is known that over 500 athletic trainers are already NATA certified. What is not known is how they are distributed throughout the state and in what capacity.

Registration Should be Required of Those Calling Themselves Athletic Trainers

Registration requires only that an individual file his name, location, and perhaps some background information. No entry standards are typically established. Registration is the appropriate level of regulation if the Committee believes following:

- There is a low potential for risk but consumers need to know that some state redress is possible.

- Skill and training can be variable but differentiated from ordinary work and labor.
- Autonomy is variable.
- Criterion 1, 4, 5, and 6 must be met.

When compared with the cost of the other forms of state professional regulation, registration is low. However, removal from the registry is the strongest disciplinary mechanism available to address problems.

No Change in the Status Quo is Needed

If the Committee does not believe Criterion 1, 4, 5, and 6 are met, then regulation of athletic trainers, per se, would not be necessary. However, if some statutory protection is sought, the Committee may wish to explore the development of criminally enforceable provisions for disclosure of the qualifications by the individual providing athletic training or of strengthening of general consumer protection laws.

Regulatory Research Committee's Recommendations

The recommendations of the Regulatory Research Committee are as follows:

- To ensure that the public is not mislead by titling, the title "Athletic Trainer," "Athletic Trainer Assistant," or "Trainer" should be restricted through statutory certification to those who are certified by the National Athletic Trainers Association. No restriction should be placed on the scope of practice of other state regulated health care providers.
- Certification should be mandatory for those individuals who engage in the tasks in Domain #2 – Recognition, Evaluation and Immediate Care of Athletic Injuries (see Appendix 5), who do not have immediate, direct, on-site supervision of a licensed health care provider, and who provide athletic training to minors 21 years of age and younger.
- A modified grandfather clause should provide a period of one year for individuals who are not currently nationally certified to meet the national certification requirements. Such persons must first have a bachelors degree in athletic training from a NATA accredited program.

Final Recommendations Adopted by the Full Board

The recommendations of the Regulatory Research Committee were considered by the full Board on September 15. The full Board adopted these recommendations with the following modifications:

- ***The title "Athletic Trainer" is to be reserved to those adequately trained.***
- ***No restrictions should be placed on the practice of other regulated health care providers provided that they are practicing within the scope of their professional license.***
- ***The Board of Medicine should be considered as the appropriate Board to regulate athletic trainers.***
- ***The regulating Board should have the discretion to vary from NATA or NATABOC in setting educational, examination, and experience requirements for entry.***
- ***The modified grandfather provision should incorporate the requirements for educational experience explained in the report section "What is an athletic trainer?" on pages 4 and 5. Further, the determination of what constitutes meeting those requirements should be a matter for the regulating Board to resolve.***

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Appendix 1

SENATE JOINT RESOLUTION NO. 122

Requesting the Board of Health Professions to conduct a study on whether the practice of athletic trainers should be regulated.

Agreed to by the Senate, February 13, 1998
Agreed to by the House of Delegates, March 12, 1998

WHEREAS, athletic trainers are employed by physical therapists, physicians, corporations, private rehabilitation clinics, and many athletic teams in the Commonwealth; and

WHEREAS, the role of athletic trainer has become increasingly more significant to the safety and well-being of active people; and

WHEREAS, in many instances the first responder to an accident which occurs during a sporting event is an athletic trainer, who must make an immediate, independent decision as to the severity of an injury; and

WHEREAS, the athletic trainer develops conditioning and training regimens for active children, adolescents and adults, and works with physicians and physical therapists to develop and implement treatments to heal injuries; and

WHEREAS, the National Athletic Trainers Association requires all applicants for certification to possess a college degree and to have completed an athletic training program, approved by the National Athletic Trainers Association, of at least two years of study, including 800 hours of supervised athletic training experience; and

WHEREAS, presently there are more than 900 athletic trainers practicing in the Commonwealth, many without national certification; and

WHEREAS, presently there are individuals in the Commonwealth who are serving in the capacity of athletic trainers, without national certification, at the high school, college, industrial, professional and clinical level, and this lack of certification or of a required training level could result in serious injury to the active citizens of the Commonwealth; and

WHEREAS, in the Commonwealth there is presently no regulation of athletic trainers, nor are there education or experience requirements for those who practice as athletic trainers; and

WHEREAS, there are presently no state standards of qualifications or competency provided for those who employ athletic trainers; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Board of Health Professions be requested to conduct a study to determine whether the practice of athletic trainers should be regulated. As a part of the study, the Board shall determine the fiscal impact of any such regulation.

All agencies of the Commonwealth shall provide assistance to the Board of Health Professions, upon request.

The Board of Health Professions shall complete its work in time to submit its findings and recommendations to the Governor and the 1999 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

Appendix 2

VIRGINIA BOARD OF HEALTH PROFESSIONS
DEPARTMENT OF HEALTH PROFESSIONS

Workplan
Study of the Need to Regulate Athletic Trainers
Pursuant to SJR 122 (1998)

Background. This study is being conducted pursuant to Senate Joint Resolution 122 of the 1998 Session of the General Assembly (see Appendix) to determine whether the practice of athletic trainers should be regulated in Virginia. The current study will review not only the need for regulation but also its fiscal impact on the Commonwealth.

Frequently, athletic trainers are the first to provide health care assistance when sports injuries occur, including those involving minors. As such, they often make independent decisions as to the severity of injuries and determine whether a referral to a physician is necessary. In Virginia, there are no statutory standards for the practice or training of athletic trainers or for their supervision by employers. Currently, 33 states regulate athletic trainers to some degree.

Authority. By virtue of the statutory authority of the Board of Health Professions to advise the Governor, the General Assembly, and the Department Director on matters related to the regulation and level of regulation of health care occupations and professions, the Board will conduct the study and provide recommendations through the Director and Secretary of Health and Human Resources accordingly (see §54.1-2510 of the Code of Virginia).

To govern evaluative reviews, the Board has developed formal criteria and policies referenced in its publication, *Policies and Procedures for the Evaluation of the Need to Regulate Health Occupations and Professions, 1998.* Among other things, the criteria assess the degree of risk from unregulated practice, the costs and benefits of the various levels of regulation, and the advantages and disadvantages of the various alternatives to regulation that might protect the public. By adopting these criteria and application policies, the Board has endorsed a consistent standard by which to judge the need to regulate any health profession. The aim of this standard is to lead decision-makers to consider the least governmental restriction possible that is consistent with the public's protection. This

standard is in keeping with regulatory principles established in Virginia law and is accepted in the national community of regulators.

Study Scope & Methodology. The general scope of this study will be to review the competencies and standards of practice for athletic trainers in the Commonwealth and other jurisdictions. The Committee will focus their efforts in determining the answers to the following key questions:

- What is the potential risk for harm to the consumer?

- What specialized skills and training do athletic trainers possess?

- To what degree is independent judgment required in their practices?

- Is their scope of practice distinguishable from other regulated occupations or professions?

- What would be the economic impact to the public if this group were regulated?

- Are there alternatives other than state regulation of this profession which would adequately protect the public?

- Finally, if the Committee determines that this profession requires state regulation, what is the least restrictive level that is consistent with the protection of the public's health, safety and welfare?

To answer the key questions, the following steps are recommended:

1. Conduct a review of the general policy literature, if any, related to the regulation of athletic trainers.

2. Conduct a review of the current relevant federal and states' laws and regulations.

3. Review the most recent job analysis (role delineation study).

4. Review malpractice insurance coverage data in conjunction with other data to address Criterion One - Risk of Harm to the Consumer and Criterion Five - Economic Impact.

5. Prepare an initial draft report to the Board for public comment.

6. Conduct a hearing on the issue of the state regulation of this profession, including any public health and safety issues germane to current practices.

7. Conduct a review of the knowledge and tasks from the role delineation study to apply criticality scales appropriate for the first four Criteria.

8. Review all public comment, apply the Board's criteria and policies, and consider recommendations for changes in Virginia statute.

9. Prepare a draft with recommendations to the full Board.

10. Review the report and recommendations by the Board, and publish a draft report for consideration by the Department Director and the Secretary of Health and Human Resources.

11. If required, based on recommendations by the Department Director and Secretary, amend the report and prepare a final report for their approval.

TIMETABLE

February 3, 1998	-	Assignment of the workplan by the Regulatory Research Committee & Full Board
April 25, 1998	-	Progress Report to the Board
June 9, 1998	-	Draft Report to the Regulatory Research Committee/ Progress Report to the Board
Summer TBA	-	Public Hearing
August 14, 1998	-	Draft Report to the Regulatory Research Committee
September 8, 1998	-	Regulatory Research Committee Report to the Full Board and Final Action on Report
October 1, 1998	-	Final Report to the Department Director and Secretary

Resources Required. The resources for this review are included in the FY 1998-99 Budget of the Board of Health Professions. It is estimated that the review will require approximately 1/7th of the time of the Deputy Executive Director and 500 hours of a research assistant or vendor time. The total cost associated with this project to include telephone charges, photocopying, office materials, as well as wages is estimated at $2,000.

4/28/98

Appendix

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WHEREAS, the role of athletic trainer has become increasingly more significant to the safety and well-being of active people; and

WHEREAS, in many instances the first responder to an accident which occurs during a sporting event is an athletic trainer, who must make an immediate, independent decision as to the severity of an injury; and

WHEREAS, the athletic trainer develops conditioning and training regimens for active children, adolescents and adults, and works with physicians and physical therapists to develop and implement treatments to heal injuries; and

WHEREAS, the National Athletic Trainers Association requires all applicants for certification to possess a college degree and to have completed an athletic training program, approved by the National Athletic Trainers Association, of at least two years of study, including 800 hours of supervised athletic training experience; and

WHEREAS, presently there are more than 900 athletic trainers practicing in the Commonwealth, many without national certification; and

WHEREAS, presently there are individuals in the Commonwealth who are serving in the capacity of athletic trainers, without national certification, at the high school, college, industrial, professional and clinical level, and this lack of certification or of a required training level could result in serious injury to the active citizens of the Commonwealth; and

WHEREAS, in the Commonwealth there is presently no regulation of athletic trainers, nor are there education or experience requirements for those who practice as athletic trainers; and

WHEREAS, there are presently no state standards of qualifications or competency provided for those who employ athletic trainers; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Board of Health Professions be requested to conduct a study to determine whether the practice of athletic trainers should be regulated. As a part of the study, the Board shall determine the fiscal impact of any such regulation.

All agencies of the Commonwealth shall provide assistance to the Board of Health Professions, upon request.

The Board of Health Professions shall complete its work in time to submit its findings and recommendations to the Governor and the 1999 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

Appendix 3

VIRGINIA BOARD OF HEALTH PROFESSIONS
CRITERIA FOR EVALUATING THE NEED FOR REGULATION

Initially Adopted October, 1991
Readopted February, 1998

Criterion One: Risk for Harm to the Consumer
The unregulated practice of the health occupation will harm or endanger the public health, safety or welfare. The harm is recognizable and not remote or dependent on tenuous argument. The harm results from: (a) practices inherent in the occupation, (b) characteristics of the clients served, (c) the setting or supervisory arrangements for the delivery of health services, or (d) from any combination of these factors.

Criterion Two: Specialized Skills and Training
The practice of the health occupation requires specialized education and training, and the public needs to have benefits by assurance of initial and continuing occupational competence.

Criterion Three: Autonomous Practice
The functions and responsibilities of the practitioner require independent judgment and the members of the occupational group practice autonomously.

Criterion Four: Scope of Practice
The scope of practice is distinguishable from other licensed, certified and registered occupations, in spite of possible overlapping of professional duties, methods of examination, instrumentation, or therapeutic modalities.

Criterion Five: Economic Impact
The economic costs to the public of regulating the occupational group are justified. These costs result from restriction of the supply of practitioner, and the cost of operation of regulatory boards and agencies.

Criterion Six: Alternatives to Regulation There are no alternatives to State regulation of the occupation which adequately protect the public. Inspections and injunctions, disclosure requirements, and the strengthening of consumer protection laws and regulations are examples of methods of addressing the risk for public harm that do not require regulation of the occupation or profession.

Criterion Seven: Least Restrictive Regulation
When it is determined that the State regulation of the occupation or profession is necessary, the least restrictive level of occupational regulation consistent with public protection will be recommended to the Governor, the General Assembly and the Director of the Department of Health Professions.

Appendix 4

Criteria for Recognition of Allied Health Occupations

1. The allied health occupation must represent a distinct and well-defined field.
2. There must be a demonstrated need for the allied health occupation and for accreditation of educational programs which prepare persons to enter the field.
3. Educational programs for the allied health occupation should not duplicate educational programs for already existing allied health occupations.
4. Organizations such seeking CAAHEP recognition of the allied health occupation must be national in scope and have legitimate concerns about and responsibilities for the quality of practitioners prepared by the allied health educational programs.
5. An allied health program consisting exclusively of on-the-job training will not be considered for recognition.
6. Educational programs can be of any length. Programs must comply with established standards and submit documentation that graduates have gained the required skills and knowledge to obtain entry-level positions within the occupation.
7. To be eligible for recognition, the allied health occupation must have programs already established with enrolled students.

List of Currently Recognized Allied Health Professions

Anesthesiologist Assistant
Athletic Trainer
Cardiovascular Technologist
Cytotechnologist
Diagnostic Medical Sonographer
Electroneurodiagnostic Technologist
Emergency Medical Technician-Paramedic
Health Information Administrator/Technician
Kinesiotherapist
Medical Assistant
Medical Illustrator
Ophthalmic Medical Technician/Technologist
Orthotist/Prosthetist
Perfusionist
Physician Assistant
Respiratory Therapist/Therapy Technician
Specialist in Blood Bank Technology
Surgical Technologist

Taken from Commission on Health Accreditation (1997).

Appendix 5

Specific Tasks Defining the Five Content Domains of Athletic Trainers as Determined by the NATA Board of Certification, Inc. Role Delineation Study*

Domain 1: Prevention of Athletic Injuries

Task 1. Identify physical conditions predisposing the athlete or physically active individual to increased risk of injury/illness in athletic activity by following accepted pre-participation examination guidelines in order to ensure safe participation.

Task 2. Supervise conditioning programs and testing for athletes or physically active individuals using mechanical and/or other techniques in order to ensure readiness for safe participation in physical activity.

Task 3. Monitor environmental conditions (e.g., temperature, humidity, lightning) of playing or practice areas by following accepted guidelines in order to make recommendations regarding safe participation.

Task 4. Assess athletic apparatuses and athletic activity areas (e.g., playing surfaces, gyms, lockers and athletic training room facilities) by periodic inspection and review of maintenance records to ensure a safe environment.

Task 5. Construct custom protective devices by fabricating and fitting with appropriate materials in order to protect specific body parts of the body from injury during athletic activity.

Task 6. Apply specific and appropriate taping, wrapping, or prophylactic devices to the athlete or physically active individual by adhering to principles of biomechanics and injury mechanism in order to prevent injury or reinjury.

Task 7. Evaluate the use and maintenance of protective devices and athletic equipment (e.g., helmets, shoulder pads, shin guards) by inspecting and assessing the equipment in order to ensure optimal protection of the athlete or physically active individual.

Task 8. Educate parents, staff, coaches, athletes, etc., about the risks associated with participation and unsafe practices using direct communication in order to provide an opportunity for them to make an informed decision concerning physical activity.

Domain 2: Recognition, Evaluation, and Immediate Care of Athletic Injuries

Task 1. Obtain a history from the athlete or physically active individual or witnesses through observation and interview in order to determine the pathology and extent of the injury/illness.

*From *The National Athletic Trainers Association Board of Certification, Inc. Role Delineation Study, 3rd Edition*, (1995), with permission from NATABOC, Inc.

Task 2. Inspect the involved area using bilateral comparison, if appropriate, in order to determine the extent of the injury/illness.

Task 3. Palpate the involved area using knowledge of human anatomy in order to determine the extent of the injury/illness.

Task 4. Perform specific tests on the involved area drawing on knowledge of anatomy, physiology, biomechanics, etc., in order to determine the extent of the injury/illness.

Task 5. Determine the appropriate course of action by interpreting the signs and symptoms of the injury/illness in order to provide the necessary immediate care.

Task 6. Administer first aid using standard, approved techniques and activate the emergency plan, if appropriate, in order to provide necessary medical care.

Task 7. Select and apply emergency equipment following standard, approved techniques in order to facilitate the athlete or physically active individual's safe, proper, and efficient transportation.

Task 8. Refer the athlete or physically active individual to the appropriate medical personnel and/or facility using standard procedures to continue proper medical care.

Domain 3: Rehabilitation and Reconditioning of Athletic Injuries

Task 1. Identify injury/illness status by using standard techniques for evaluator and re-assessment in order to determine appropriate rehabilitation programs.

Task 2. Construct rehabilitation/re-conditioning programs for the injured/ill athlete or physically active individual using standard procedures for therapeutic exercise and modalities in order to restore functional status.

Task 3. Select appropriate rehabilitation equipment, manual techniques, and therapeutic modalities by evaluating the theory and use as defined by accepted standards of care in order to enhance recovery.

Task 4. Administer rehabilitation techniques and procedures to the injured/ill athlete or physically active individual by applying accepted standards of care and protocols in order to enhance recovery.

Task 5. Evaluate the readiness of the injured/ill athlete or physically active individual by assessing functional status in order to ensure a safe return to participation.

Task 6. Educate parents, staff, coaches, athletes, physically active individuals, etc., about the rehabilitation process using direct communication in order to enhance rehabilitation.

Domain 4: Health Care Administration

Task 1. Maintain the health care records of the athlete or physically active individual using a recognized, comprehensive recording process in order to document procedures/services rendered by health care professionals.

Task 2. Comply with safety and sanitation standards by maintaining facilities and equipment in order to ensure a safe environment.

Task 4. Establish written guidelines for injury/illness management by standardizing operating procedures in order to provide a consistent quality of care.

Task 5. Obtain equipment and supplies by evaluating reliable product information in order to provide athletic training services for athletes and physically active individuals.

Task 6. Create a plan which includes emergency, management, and referral systems specific to the setting by involving appropriate health care professionals in order to facilitate proper care.

Task 7. Reduce the risk of exposure to infectious agents by following universal precautions in order to prevent the transmission of infectious diseases.

Domain 5: Professional Development and Responsibility

Task 1. Maintain knowledge of contemporary sports medicine issues by participating in continuing education activities in order to provide an appropriate standard of care.

Task 2. Develop interpersonal communication skills by interacting with others (e.g., parents, coaches, colleagues, athletes, physically active individuals) in order to enhance proficiency and professionalism.

Task 3. Adhere to ethical and legal parameters by following established guidelines which define the proper role of the certified athletic trainer in order to protect athletes, physically active individuals, and the public.

Task 4. Assimilate appropriate sports medicine research by using available resources in order to enhance professional growth.

Task 5. Educate the public by serving as a resource in order to enhance awareness of the roles and responsibilities of the certified athletic trainer.

Appendix 6

DEFINITIONS ATHLETIC TRAINERS AND THEIR PRACTICE FROM OTHER STATES' STATUTES

Thirty-seven states currently regulate athletic trainers or athletic training in some fashion. Eighteen states regulate through licensure, eight through certification, and six through registration. Four states provide statutory exemptions from practice restrictions imposed by other health professions' laws, while one state, West Virginia, has established though their Department of Education requirements for state employees who work in public schools. The following listing details the level of regulation and the definitions for "athletic trainer" and/or "athletic training" employed by these regulating states in statutes and/or regulation.

Legend: (L) = Licensure, (R) = Registration, (C) = Certification, (E) = Exemption

ALABAMA (L) No response.

ARIZONA (E)

ARKANSAS (L) *(§17-93-402)*

"Athletic trainer" means a person licensed by the state to engage in athletic training.

"Athletic training" means the prevention, recognition, evaluation, treatment, and rehabilitation of an athletic injury or illness and the organization and administration of exercise, conditioning, and athletic training programs.

COLORADO (E)

CONNECTICUT (E)

DELAWARE (L) *(§2602)*

"Athletic trainer" shall mean a person licensed by the State Board of Physical Therapy Examiners as an athletic trainer after meeting the requirements of this chapter and rules and regulations promulgated pursuant thereto. The athletic trainer functioning in the nonclinical setting may evaluate, treat and provide appropriate first aid to injuries incurred by the athlete during participation in or training for scholastic professional or sanctioned amateur athletic activities. All treatments for injuries to athletes require a physician's referral, except for minor sprains, strains and contusions, first aid excluded. Evaluation and/or treatment by the athletic trainer to supportive staff, spectators and persons other than the athlete shall be limited to first aid. An athletic trainer functioning in a clinical setting may use therapeutic exercises and modalities such as heat, cold, light, air, massage, water, sound and electricity, for the treatment of musculoskeletal injuries. The athletic trainer may also provide first aid in the clinical setting. All treatment by the athletic trainer in a clinical setting must be performed while under the direct, on-site supervision of a physical therapist. The athletic trainer in a clinical setting may not independently initiate, modify or discharge a patient's program

"Athletic training" means and includes: (1) prevention of athletic injuries, (2) recognition and evaluation of athletic injuries, (3) management, treatment and disposition of athletic injuries, (4) rehabilitation of athletic injuries, (5) organization and administration of athletic training programs, and (6) education and counseling of athletes regarding a program(s) of athletic training. Athletic training shall also include prevention, conditioning and reconditioning of nonathletic injuries as defined by law and regulation by the Board.

FLORIDA (L) *(§468.701)*

"Athletic trainer" means a person licensed under this part.

"Athletic training" means the recognition, prevention, and treatment of athletic injuries.

GEORGIA(L) *(§43-5-1)*

"Athletic trainer" means a person with specific qualifications, as set forth in Code Section 43-5-8 who, upon the advice and consent of a physician, carries out the practice of prevention, recognition, evaluation, management, disposition, treatment, or rehabilitation of athletic injuries; and, in carrying out these functions, the athletic trainer is authorized to use physical modalities, such as heat, light, sound, cold, electricity, or mechanical devices related to prevention, recognition, evaluation, management, disposition, rehabilitation, and treatment. The term "athletic trainer" shall not include any student, teacher, or other person who serves as an athletic trainer for an elementary school or high school, either public or private, within this state.

HAWAII (E)

IDAHO (R) *(§54-3902)*

"Athletic trainer," or other such term as recognized by the board [of athletic trainers], means a person with the specific qualifications for registration set forth pursuant to this chapter, who, upon the direction of the team physician and/or consulting physician, carries out the practice of prevention, care and reconditioning of physical injuries incurred by athletes, employing the application of cold, heat, electrical stimulation, and/or exercise.

ILLINOIS (L) *(§5/2-3)*

"Licensed athletic trainer" means a person licensed to practice athletic training as defined in this Act and with the specific qualifications set forth in Section (9) of this Act, who, upon the direction of his or her team physician and/or consulting physician carries out the practice of prevention/emergency care and/or physical reconditioning of injuries incurred by athletes participating in an athletic program conducted by an educational institution, professional athletic organization, sanction amateur athletic organization employing the athletic trainer; or a person who under the direction of a physician, carries out comparable functions for a health organization-based extramural program of athletic training service for athletes. Specific duties of the athletic trainer include but are not limited to:

A. Supervision of the selection, fitting and maintenance of protective equipment;
B. Provision of assistance to the coaching staff in the development and implementation of conditioning programs;
C. Counseling of athletes on nutrition and hygiene;

D. Supervision of athletic training facility and inspection of playing facilities;
E. Selection and maintenance of athletic training equipment and supplies;
F. Instruction and supervision of student trainer staff;
G. Coordination with team physician to provide
   (i) pre-competition physical exam and health history updates,
   (ii) game coverage or phone access to a physician or paramedic,
   (iii) follow-up injury care,
   (iv) reconditioning programs, and
   (v) assistance on all matters pertaining to the health and well-being of athletes.
H. Provision of on-site injury care and evaluation as well as appropriate transportation, follow-up treatment and rehabilitation as necessary for all injuries sustained by athletes in the program;
I. With physician, determination of when an athlete may safely return to full participation post-injury; and
J. Maintenance of complete and accurate records of all athletic injuries and treatments rendered.

INDIANA(C) *(§§IC 25-5.1-1-3 and IC 25-5.1-1-4)*

"Athletic trainer" means an individual who is or may be employed by an educational institution, a professional or an amateur athletic organization, an athletic facility, or a health care facility to practice athletic training.

"Athletic training" means the practice of prevention, recognition, assessment, management, treatment, disposition, and reconditioning of athletic injuries under the direction of a licensed team medical doctor, osteopath, podiatrist, or chiropractor. The term includes the following:
(1) Practice that may be conducted by an athletic trainer through the use of heat, light, sound, cold, electricity, exercise, or mechanical devices related to the care and conditioning of athletes.
(2) The organization and administration of educational programs and athletic facilities
(3) The education and counseling of the public on matters related to athletic training

IOWA (L) *(152D.1)*

"Licensed athletic trainer" means a person licensed under this chapter.

"Practice of athletic training" means the prevention, physical education, emergency care, and physical reconditioning relating to injuries and illnesses incurred through sports-induced trauma, which occurs during the preparation for or participation in a sports competition or during a physical training program, either or which is sponsored by an educational institution, amateur or professional athletic group,, or other recognized organization, by a person who uses the title of licensed athletic trainer.

KENTUCKY (C) *(§311.900)*

"Athletic trainer" means a person with specific qualifications, as set forth in KRS 311.916, who, upon the advice and consent of a team physician, carries out the practice of prevention or physical rehabilitation, or both, of injuries incurred by participating athletes at an educational institution, professional athletic organization, or other bona fide athletic organization. In carrying out these functions the athletic trainer is authorized to use whatever physical modalities as are deemed necessary by a team physician.

LOUISIANA (C) *(§3302)*

"Athletic trainer" **means a person with the specific qualifications set forth in R.S.37-3306 who, under the direction and supervision of a medical physician carries out the practice of prevention, emergency management, and physical rehabilitation of injuries incurred by athletes at an educational institution, professional athletic organization, and any athletes participating in athletic competition or events sponsored by these organizations or other board [of medical examiners] sanctioned organization. In carrying out these functions, the athletic trainer shall use whatever physical modalities are prescribed by a team physician or consulting physician or both.**

MAINE (L) *(§14352)*

"Athletic trainer" **means a person licensed by the department to use that title after meeting the requirements of this chapter.**

"Athletic training" **means: (A) prevention of athletic injuries; (B) recognition and evaluation of athletic injuries; (C) management, treatment and disposition of athletic injuries; (D) rehabilitation of athletic injuries; (E) organization and administration of an athletic training program; and (F) education and counseling of athletes, recreational athletes, coaches, family members, medical personnel and communities in the area of care and prevention of athletic injuries.**

MASSACHUSETTS (L) *(§112-23A)*

"Athletic trainer," **any person who is duly licensed in accordance with this section as an athlteic trainer and who limits his practice to schools, teams or organizations with whom he is associated and who is under the direction of a physician or dentist duly registered in the commonwealth.**

"Athletic training," **the application of principles, methods and procedures of evaluation and treatment of athletic injuries, preconditioning, conditioning and reconditioning of the athlete through the use of appropriate preventative and supportive devices, temporary splinting and bracing, physical modalities of heat, cold, massage, water, electric stimulation, sound, exercise and exercise equipment under the discretion of a physician. Athletic training includes instruction to coaches, athletes, parents, medical personnel and communities in the area of care and prevention of athletic injuries.**

MINNESOTA (R) *(§148-7802)*

"Athletic trainer" **means a person who engages in athletic training under section 148-7806and is registered under section 148-7808.**

"Athletic training" **by a registered athletic trainer under section 148-7808 includes the activities described in paragraphs (a) to (e).**

(a) An athletic trainer shall:

(1) prevent, recognize, and evaluate athletic injuries;

(2) give emergency care and first aid;

(3) manage and treat athletic injuries;

(4) rehabilitate and physically recondition athletic injuries.

The athletic trainer may use modalities such as cold, heat, light, sound, electricity, exercise, and mechanical devices for treatment and rehabilitation of athletic injuries to athletes in the primary employment site.

(b) The primary physician shall establish evaluation and treatment protocols to be used by the athletic trainer. The primary physician shall record the protocols on a form prescribed by the board. The protocol form must be updated yearly at the athletic trainer's registration renewal time and kept on file by the athletic trainer.

(c) At the primary employment site, except in a corporate setting an athletic trainer may evaluate and treat an athlete for an athletic injury not previously diagnosed for not more than 30 days, or a period of time as designated by the primary physician on the protocol form, from the date of initial evaluation and treatment. Preventative care after resolution of the injury is not considered treatment. This paragraph does not apply to a person who is referred for treatment by a person licensed in this state to practice medicine as defined in section 147.081 to practice chiropractic as defined in section 148.01, to practice podiatry as defined in section 153.01, or to practice dentistry as defined in section 150A.05 and whose license is in good standing.

(d) An athletic trainer may:
(1) organize and administer an athletic training program including, but not limited to, educating and counseling athletes;
(2) monitor the signs, symptoms, general behavior, and general physical response of an athlete to treatment and rehabilitation including, but not limited to, whether the signs, symptoms, reactions, behavior, or general response show abnormal characteristics; and
(3) make suggestions to the primary physician or other treating provider for a modification of the treatment and rehabilitation of an injured athlete based on the indicators in clause (2).

(e) In a clinical, corporate, and physical therapy setting, when the service is provided is, or is represented as being, physical therapy, and athletic trainer may work only under the direct supervision of a physical therapist as defined in section 148.65.

MISSISSIPPI (L) No response.

MISSOURI (R) *(§334.702)*

"Athletic trainer" a person who meets the qualifications of section 334.708 and who, upon the direction of the team physician and/or consulting physician, practices prevention, emergency care, first aid, treatment, or physical rehabilitation of injuries incurred by athletes in the manner, means, and methods deemed necessary to effect care or rehabilitation, or both.

NEBRASKA (L) *(§§71-1,238 and 71-1-2,240(2)and (3)))*

"Athletic trainer" shall mean a person who is responsible for the prevention, emergency care, first aid, treatment and rehabilitation of athletic injuries to athletes under his or her care and who is licensed to perform the functions set out in section 71-1,240.

"Athletic training" shall mean the prevention, evaluation emergency care, first aid treatment, and rehabilitation of athletic injuries utilizing the treatments set out in section 71-240

Scope of practice. Athletic trainers shall be authorized to use the following physical modalities in the treatment of athletic injuries under guidelines established with a referring licensed physician: (a)

application of electric stimulation; (b) application of ultrasound; (c) use of medical diathermies, (d) application of infrared light, and (e) application of ultraviolet light.

NEW HAMPSHIRE (C) *(326-G:1)*

"Athletic trainer" means a person who, upon the direction of a licensed team or consulting physician, practices athletic training on injuries incurred by athletes who participate in any sports program conducted by an educational institution, professional sports organization, or sanctioned amateur athletic organization, or in any recreational sports activity.

"Practice of athletic training" means, but is not limited to: (a) prevention of athletic injuries, (b) recognition and evaluation of athletic injuries, (c) management, treatment, and disposition of athletic injuries, (d) rehabilitation of athletic injuries, (e) organization and administration of athletic training program, (f) education and counseling of athletes.

NEW JERSEY (R) *(§45:9-37.36)*

"Athletic trainer" means a person who practices athletic training as an employee of a school, college, university or professional team.

"Athletic training" means and includes the practice of physical conditioning and reconditioning of athletes and the prevention of injuries incurred by athletes. Athletic training shall also include, at the direction of a physician licensed in this State, the application of physical treatment modalities, as recommended by the advisory committee and defined in regulation by the board, to athletes.

NEW MEXICO (L) *(§61-14D-2* and *§61-14D-6)*

"Athletic trainer" means a person who, with the advice and consent of a licensed physician, practices the treatment, prevention, care and rehabilitation of injuries incurred by athletes.

Scope of practice. The practice of athletic training includes the prevention, care and rehabilitation of athlete's injuries. Athletic trainers may evaluate and treat athletes pursuant to the written prescription, standing order or protocol of a licensed physician; provided that an athletic trainer may treat postsurgical conditions only pursuant to the written prescription of that athlete's surgeon. To carry out these functions, an athletic trainer may use exercise and physical modalities such as heat, light, sound, cold, electricity or mechanical devices related to rehabilitation and treatment. Nothing in the Athletic Trainer Practice Act [61-14D-1 to 61-14D-19 NMSA 1978] shall be construed to allow an athletic trainer to provide the initial treatment or evaluation of an athlete injured in a non-athletic setting.

NEW YORK (C) *(§8352)*

"Practice of athletic training" is defined as the application of principles, methods and procedures for managing athletic injuries, which shall include the preconditioning, conditioning and reconditioning of an individual who has suffered an athletic injury through the use of appropriate preventative and supportive devices, under the supervision of a physician and recognizing illness and referring to the appropriate medical profession with implementation of treatment pursuant to physician's orders. Athletic training includes instruction to coaches, athletes, parents, medical personnel and communities in the area of care and prevention of athletic injuries.

The scope of work herein shall not be construed as authorizing the reconditioning of neurologic injuries,, conditions or disease.

NORTH CAROLINA (L) [Taken from North Carolina House Bill 824 – not updated in printing of official statutes as of August 24, 1998.]

"Athletic trainer" means a person who, under written protocol with a physician licensed under Article 1 of Chapter 90 of the General Statutes and filed with the North Carolina Medical Board, carries out the practice of care, prevention, and rehabilitation of injuries incurred by athletes, and who, in carrying out these functions, may use physical modalities, including heat, light, sound, cold, electricity, or mechanical devices related to rehabilitation.

NORTH DAKOTA (L) No response.

OHIO (L) *(§4755.60)*

"Athletic trainer" means a person who has met the qualifications of this chapter for licensure and who is employed by an educational institution, professional or amateur organization, athletic facility, or health care facility to practice athletic training.

"Athletic training" means the practice of prevention, recognition, and assessment of an athletic injury and the complete management, treatment, disposition, and reconditioning of acute athletic injuries upon the referral of an individual authorized under Chapter 4731 of the Revised Code to practice medicine and surgery, osteopathic medicine and surgery, or podiatry, a dentist licensed under Chapter 4715 of the Revised Code, a physical therapist licensed under this chapter, or a chiropractor licensed under Chapter 4734 of the Revised Code. Athletic training also includes the organization and administration of educational programs and athletic facilities, and the education of and consulting with the public as it pertains to athletic training.

OKLAHOMA (L) *(§59-526)*

"Athletic trainer" means a person with the qualifications specified in Section 530 of this title, whose major responsibility is the rendering of professional services for the prevention, emergency care, first aid and treatment of injuries incurred by an athlete by whatever methods are available, upon written protocol from the team physician or consulting physician to effect care, or rehabilitation.

OREGON (R) *(§688.700)*

Voluntary registration provisions. The Health Division of the Department of Human Resources shall establish a system for the voluntary registration of individuals serving as athletic trainers within the State of Oregon. Upon submittal of an application for registration accompanied by payment of a registration fee and evidence of minimal qualifications, the division shall issue a certificate of registration to those individuals registering with the division.

In determining minimal qualifications, the division shall consider whether the applicant is currently certified as an athletic trainer by the Board of Certification of the National Athletic Trainers Association or by an equivalent organization recognized by the division.

PENNSYLVANIA (C) No response.

RHODE ISLAND (L) *(§5-60-2)*

"Athletic trainer" means a person with the specific qualifications set forth in section 5-60-10 who, upon the direction of his or her team physician and/or consulting physician, carries out the practice of prevention and/or physical reconditioning of injuries incurred by only those athletes participating in the athletic program being conducted by the educational institution, professional athletic organization, or board sanctioned amateur organization. To carry out these functions, the athletic trainer is authorized to utilize modalities such as heat, light, sound, cold, electricity, exercise, or mechanical devices related to care and reconditioning.

SOUTH CAROLINA (C) *(§44-75-20)*

"Athletic trainer" means a person with specific qualifications as set forth in Section 44-75-50 who, upon the advice and consent of a licensed physician, carries out the practice of care, prevention, and physical rehabilitation of athletic injuries, and who, in carrying out these functions, may use physical modalities, including, but not limited to, heat, light, sound, cold, electricity, or mechanical devices related to rehabilitation and treatment.

SOUTH DAKOTA(L) *(South Dakota Code §36-29-1)*

"Athletic trainer" a person with specific qualifications as set forth in §36-29-3, whose responsibility is the prevention, evaluation, emergency care, treatment and reconditioning of athletic injuries under the direction of the team or treating physician. The athletic trainer may use cryotherapy, which includes cold packs, ice packs, cold water immersion and spray coolants; thermotherapy, which includes topical analgesics, moist hot packs, heating pads, infrared lamp and paraffin bath; hydrotherapy, which includes whirlpool,; and therapeutic exercise common to athletic training which includes stretching and those exercises needed to maintain control; in accordance with a physician's written protocol. Any rehabilitative procedures recommended by a physician for the rehabilitation of athletic injuries which have been referred and all other physical modalities may be administered only following the prescription of the team or referring physician.

TENNESSEE (C) *(Tennessee Code §61-14E-4)*

"Athletic trainer" means a person with specific qualifications as set forth in this chapter who, upon advice, consent and oral or written prescriptions of a physician, carries out the practice of prevention, recognition, evaluation, management, disposition, treatment, or rehabilitation of athletic injuries, and, in carrying out these functions the athletic trainer is authorized to use physical modalities, such as heat, light, sound, cold, electricity, or mechanical devices related to prevention, recognition, evaluation, management, disposition, rehabilitation, and treatment.

TEXAS (L) *(§328-B:10.4512d)*

"Athletic trainer" means a person with specific qualifications, as set forth in this Act, who, upon the advice and consent of his team physician carries out the practice, prevention and/or physical rehabilitation of injuries incurred by athletes. To carry out these function the athletic trainer is authorized

to use physical modalities such as heat, cold, electricity, or mechanical devices related to rehabilitation and treatment.

WEST VIRGINIA(Minimum Requirements for School Employees)

No specific definitions in state statute. Individual localities regulate the use of athletic trainers.

Appendix 7

DISCIPLINARY SURVEY OF STATES REGULATING ATHLETIC TRAINERS

DISCIPLINARY SURVEY OF STATES REGULATING ATHLETIC TRAINERS

STATE RESPONDING_____ CONTACT PERSON:_____

TELEPHONE NUMBER: _____ E-MAIL_____

1. APPROXIMATELY HOW MANY ATHLETIC TRAINERS ARE CURRENTLY REGULATED BY YOUR STATE? _____

2. IN WHAT YEAR WERE ATHLETIC TRAINERS FIRST REGULATED IN YOUR STATE?
   _____

3. HOW MANY COMPLAINTS AGAINST ATHLETIC TRAINERS HAVE BEEN FILED WITH YOUR AGENCY
   A. IN YOUR FISCAL YEAR 1997?_____
   B. IN YOUR FISCAL YEAR 1996?_____

4. HOW MANY ATHLETIC TRAINERS HAVE BEEN DISCIPLINED
   A. IN YOUR FISCAL YEAR 1997? _____
   B. IN YOUR FISCAL YEAR 1996? _____

5. FOR WHAT TYPES OF OFFENSES HAVE ATHLETIC TRAINERS BEEN DISCIPLINED IN YOUR FISCAL YEAR 1997?

   _____ % SUBSTANDARD CARE
   _____ % FRAUD/FALSE ADVERTISING
   _____ % SUBSTANCE ABUSE
   _____ % UNPROFESSIONAL CONDUCT
   _____ % OTHER (SPECIFY)

6. FOR WHAT TYPES OF OFFENSES HAVE ATHLETIC TRAINERS BEEN DISCIPLINED IN YOUR FISCAL YEAR 1996?

   _____ % SUBSTANDARD CARE
   _____ % FRAUD/FALSE ADVERTISING
   _____ % SUBSTANCE ABUSE
   _____ % UNPROFESSIONAL CONDUCT
   _____ % OTHER (SPECIFY)

THANK YOU. PLEASE RETURN THIS SURVEY BY AUGUST 15, 1998 TO:

ELIZABETH A. CARTER, PH.D.
VIRGINIA DEPARTMENT OF HEALTH PROFESSIONS
VIRGINIA BOARD OF HEALTH PROFESSIONS
6606 W. BROAD STREET, FOURTH FLOOR
RICHMOND, VA 23230-1717
ecarter@dhp.state.va.us
(804) 662-7691

Appendix 8

DISCUSSION DRAFT

EVALUATION OF THE RISK OF HARM TO THE PUBLIC FROM THE PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

RDI

1108 E. Main Street, Suite 1000
Richmond, Virginia 23219
(804) 643-1082 (804) 643-1085 Fax

RESEARCH DIMENSIONS INC.

Evaluation of Risk of Harm to the Public from the Professional Practice of the Athletic Trainer

Draft
For Discussion Only

Submitted to:

Board of Health Professions
Department of Health Professions
Commonwealth of Virginia
6606 West Broad Street
4th Floor
Richmond, Virginia 23230-1717

Submitted by:

Research Dimensions, Inc.
1108 East Main Street
Suite 1000
Richmond, Virginia 23219

August 28, 1998

Evaluation of Risk of Harm to the Public
from the
Professional Practice of the Athletic Trainer

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Evaluation of Risk of Harm to the Public from the Professional Practice of the Athletic Trainer

Purpose

This report details the methodology, results, and observations of an initiative designed to develop an objective method of assessing risk of harm to the public from the professional practice of the athletic trainer. The initiative spanned the mid-July 1998 to late-August 1998 time period.

Methodology

The development of an objective methodology for assessing risk of harm to the public from the professional practice of the athletic trainer involved the following steps:

- defining a measurement approach, including development of an evaluation instrument
- testing the evaluation instrument for reliability and validity, and
- analyzing and reporting results, including observations related to issues and concerns of importance raised during the process.

Defining a Measurement Approach, including Development of an Evaluation Instrument. To define a measurement approach, several issues were addressed:

- determining whether to use a task-based or incident-based system;
- developing a rating scale for severity of harm;
- developing a rating scale to factor in the likelihood or frequency of harm occurring to the public (a client) given athletic trainer performance in the execution of various tasks or incident scenarios, and
- developing assessment scenarios which would measure the likelihood of harm occurring under unlicensed vs. licensed conditions.

In defining the measurement approach, two meetings of professionals were held—each with distinct objectives. The purpose of the first meeting was to obtain insights from athletic trainers and physicians into the practice of the athletic trainer profession, to identify additional physicians and athletic trainers, including uncertified trainers who might be involved in the evaluation of the risk of harm process, and then to obtain input into the development of the evaluation instrument. Specific input sought into the

development of the evaluation instrument revolved around two issues: 1) whether a "task competency-based" or "injury incident-based" system would be preferable in the assessment of risk of harm, and 2) whether a proposed "extent of harm" scale was viewed to be sufficiently comprehensive and wide ranging in terms of the severity of injuries identified, including the extent to which the scale might require modification, additions, and so forth. The Agenda for this first meeting and the consultants attending are included as Appendix A.

The discussions held with consultants during the first meeting led to the following recommendations:

- use of a task-based as opposed to accident situation or injury incident system

- modification of the extent of harm scale to include debilitating injury which ***may or may not*** be immediately obvious

- incorporation of additional panelists to include a sports medicine family practitioner—viewed to be "on the firing line" in dealing with accident situations, a massage therapist practicing within a physical therapy clinic and having onsite field experience in college athletics, and a high school athletic trainer having knowledge of data relating to sports injuries.

The use of a task-based system was recommended for several reasons. First, the task domains, including tasks contained within each domain, have been thoroughly researched and tested by the National Athletic Trainer Association (NATA). They were considered to be a valid starting point for evaluating risk of harm based on the tasks that the athletic trainer performs in the course of his/her profession. Second, the number of injury incidents/accident situations was considered to be too large and the range of incidents too complex to address adequately within the time frame of this study.

Modification of the proposed extent of harm scale was suggested in order to ensure coverage of harm that might not be immediately obvious, but rather which would manifest itself over the time dimension. This modification was considered minor and was built into the harm scale by specifying more thoroughly the definition of debilitating injury.

Two of the recommended panelists were eventually formally requested to become a member of the panel of raters—the family practitioner sports medicine physician and the high school athletic trainer with knowledge of injury data.

Finally it should be noted that identification of uncertified trainers for possible inclusion on the panel was requested. Information on such trainers, i.e., their location of practice,

education and training, etc. has never been assembled, however. Therefore, no such recommendations were forthcoming.

Based on the results of this first meeting, a questionnaire was developed that employs a task competency-based system by which to evaluate risk of harm. The questionnaire contains two rating scales: 1) a scale to evaluate extent of harm, and 2) a scale to evaluate the likelihood of harm occurring in terms of the percentage of times that the task is performed or the percentage of clients that are treated. The questionnaire coupled with instructions and definitions for rating response categories are included as Appendix B.

Testing the Instrument for Reliability. The evaluation questionnaire, once developed, was then tested for reliability of the measurement. In order to conduct this test, a second meeting was held. The purpose of this second meeting was two-fold:

1) to obtain ratings from a panel comprised of athletic trainers, physical therapists, and physicians as to the extent of harm and likelihood of the harm occurring when various tasks are performed first under unlicensed conditions, and then, under licensed conditions,

2) to obtain insights from the panelists as to how the evaluation process could be strengthened, including perceived effectiveness and validity of the measurement instrument

The Agenda for this second meeting and the panel members attending this meeting are included as Appendix C.

After initial completion of the questionnaire using the instructions provided, discussion was held in order to obtain reaction to the instrument and the resulting ratings.

The rating process, and the discussion incorporated within this process, elicited several concerns regarding the evaluation instrument, including the following:

- definition of an athletic trainer
- nature of the scaling used in evaluating "extent of harm" and "likelihood of harm"
- range of response categories used in evaluating "extent of harm", and
- task vs. injury or accident focus of the questions

Definition of an Athletic Trainer. When asked to complete the survey instrument, several panelists wanted to define the term, athletic trainer. They emphasized that their responses would vary depending upon this definition because the field contains individuals of varied capabilities, some with training, others without. Some with national certification, others without. Therefore, a first issue of the panel session dealt with the definitional issue—even though the questionnaire itself was based on the tasks outlined

in the national role delineation study and therefore, most likely geared to a professional who was either certified or seeking to become certified.

To deal with this issue, the completion of the questionnaire was undertaken employing two sets of conditions that were somewhat different than those originally envisioned. First, the questionnaire was completed using a worse case scenario—focusing on the incompetent athletic trainer who is both untrained and uncertified—and then evaluating the extent of harm that might occur given task performance by this type of individual. Second, the questionnaire was completed using another the scenario—focusing on the competent athletic trainer who is both trained and certified—and then evaluating the extent of harm that might occur given task performance by this type of individual. In summary, completion of the questionnaire under these two sets of conditions substituted for the original intent to complete the questionnaire under unlicensed and licensed conditions.

Scaling. Another concern raised by panelists in completing the questionnaire was the scaling methodology employed. The major issues with the scaling focused on the phenomena of 1) generally having to rate extreme on the "extent of harm" scale, i.e., every task conceivably could result in major injury or death, and 2) then having to rate low on the "likelihood of occurrence" scale, i.e., the probability of such an extreme harm occurring.

Panelists also expressed concern about the wide percentage spread contained with the response categories of the "likelihood of occurrence" scale. They judged the response category, 1%-25%, to be particularly difficult because of the large response range. For example, in instances where they rated death as the "extent of harm", they then might be forced to "check" the 1% to 25% category, when in reality, the probability of occurrence was judged to be very small—say 3%. Here, the range of 1% to 25% did not adequately provide for the ***precision*** of response required.

Extent of Harm Categories. Another concern of the panelists focused on the number of "extent of harm" categories contained within the questionnaire. The consensus seemed to be that there is potential for harm occurring in each task, but that the harm could be collapsed into three basic categories—1) minor, including physical or psychological injury or financial loss, 2) severe, including debilitating injury, and 3) life threatening injury or death.

Task vs. Injury Focus. A final concern expressed by several of the panelists was the use of tasks to evaluate harm vs. the use of accident or injury scenarios. A number of the panelists considered that a focus on "accident" or "injury" situations would provide a better opportunity to make judgments between a competent vs. incompetent performer than a focus on tasks themselves. This clearly has been an issue throughout this measurement initiative and still has yet to be resolved pending a more thorough analysis of the "incident" or "accident" data available from several sources, i.e., the National Collegiate Athletic Association, the National Athletic Trainers Association (NATA), and various insurance claim data bases.

In the final analysis, each of the concerns raised by the panelists was dealt with during the panel meeting itself with the exception of the "injury"/"accident" focus issue. The concerns were addressed by revising the questionnaire and then, completing the revised questionnaire under the two sets of definitions/ conditions outlined, i.e., incompetent (untrained and uncertified) and competent (trained and certified)

In the revision process, it was suggested that an alternative 1-100 probability scale where every "extent of harm" response category could be rated according to its likely probability of occurrence be substituted for the existing scaling. Alternatively, another suggestion, and the one ultimately adopted by the panel, was that for each of the tasks contained within the questionnaire, the raters assign a probability of occurrence to each of three collapsed "extent of harm" categories—minor, severe, and life threatening or death, and that these probabilities add to 100%. A copy of a marked-up version of the revised questionnaire is contained as Appendix D.

Analysis of Results. At the conclusion of the panel meeting, using the completed questionnaire responses as data, several analyses were undertaken including:

- a comparison of the probability of various types of injuries occurring when specific tasks are performed by a "competent" vs. an "incompetent" athletic trainer weighted for the frequency of task performance, and

- calculation of a coefficient to determine the reliability of the measurement across the panel of eight raters.

Results

Likelihood of Harm Occurring. The results of the analysis are displayed in several accompanying tables. In Table 1 on the following page, it is evident that when task performance is weighted and summed across domains, the panel of raters judged the likelihood of various types of injuries occurring as being significantly higher for the "incompetent" individual than for the "competent" individual. When summed across all domains, the probability of a minor injury occurring at the hands of an incompetent individual was found to be 7 times higher than that for a competent individual. Similarly, the probability of a severe injury occurring was judged to be 8 times higher. Interestingly, the probability of an injury being life threatening or resulting in death was judged to be three times higher for the incompetent, uncertified individual than for the competent, certified individual.

When the various task domains are examined individually, it can be determined that the panel judged the largest probability for harm to occur in Domain 2, the Recognition, Evaluation and Immediate Care Tasks—tasks where first response, on the scene care is administered. Here, the probability of a minor injury occurring at the hands of an

incompetent trainer is judged to be almost 7 times more likely than that which would occur at the hands of a competent trainer. Similarly, the probability of a severe injury occurring is 9 times more likely at the hands of an incompetent trainer and death or a life threatening injury is 8 times more likely to result when an incompetent trainer is performing the task.

Table 1.

Likelihood of Various Types of Injuries Occurring When Tasks Are Performed by Incompetent vs. Competent Athletic Trainers: By Task Domain and By All Task Domains Combined

Domain	Types of Injuries					
	Minor		Severe		Life Threatening	
	Uncertified	Certified	Uncertified	Certified	Uncertified	Certified
Domain 1: Prevention of Injury Tasks	45%	8%	15%	3%	4%	1%
Domain 2: Recognition, Evaluation and Immediate Care Tasks	54%	8%	27%	3%	8%	1%
Domain 3: Rehabilitation and Reconditioning Tasks	54%	6%	19%	2%	3%	1%
Domain 4: Health Care Administration	33%	4%	12%	2%	1%	1%
Domain 5: Professional Development	27%	5%	6%	1%	1%	1%
ALL DOMAINS	**42%**	**6%**	**16%**	**2%**	**3%**	**1%**

The probability of various types of injuries occurring at the hands of incompetent vs. competent trainers for each task within each domain is outlined in Appendix E. Several observations about these individual tasks should be highlighted.

- First, it is within Domain 2. Recognition, Evaluation and Immediate Care Tasks that the probability of life threatening situations or death is judged to be much greater at the hands of an incompetent vs. a competent athletic trainer. For example, life threatening situations or death is judged to be 10 to 20 times a more likely occurrence at the hands of an incompetent vs. a competent athletic trainer in tasks within this domain which require the application of judgment: Task 5, Determine Course of Action—10 times more likely, and Task 7, Select and Apply Emergency Equipment—20 times more likely. Also, the possibility of a life threatening situation or death resulting from the administration of first aid by an incompetent trainer—Task 6--is judged to be a 10 times more likely occurrence than if this first aid were administered by a competent trainer.

- Second, it is within Domain 3, Rehabilitation and Reconditioning Tasks that the probability of minor or severe injury occurring is judged to be greater for the incompetent vs. the competent athletic trainer—particularly in those tasks related to evaluation of the readiness of the athlete (Task 5) and education of all concerned (Task 6). Specifically, the probability of a minor injury occurring is judged to be 11 times greater and the probability of a severe injury judged to be 10.5 times higher when incompetent trainers evaluate the readiness of the athlete. The education of all concerned about the rehabilitation of injuries is judged 13% to 15% more likely to result in a severe injury or a minor injury respectively when an incompetent trainer performs the task.

- Third, the probability of minor injuries occurring are judged to be significantly larger for incompetent trainers than competent trainers in Domain 4, Health Care Administration. Within this domain, the probability of a minor injury occurring when incompetent trainers perform Task 2, Comply with Safety and Sanitary Standards, is judged to be 20 times more likely than when competent trainers perform the task. Similarly, the probability of a minor injury occurring when incompetent trainers manage daily operations (Task 3) is judged to be 15 times more likely. Also, the probability of a minor injury occurring when incompetent trainers try to reduce the risk of exposure to infections (Task 7) is judged to be over 11 times more likely.

Reliability of the Measurement. An initial reliability coefficient of .56 was obtained suggesting moderate consistency in the ratings of the various panel members. Statistically, when a correction factor was applied in order to account for the small sample size of only eight (8) raters, a correlation coefficient of .70 was obtained when a sample size of 30 was assumed. This correlation suggests a very decent reliability of the measurement, particularly 1) when combined with observations related to the stability of the measurement across tasks, i.e., the significant differences between the ratings obtained for the incompetent vs. competent athletic trainer, and 2) given that the panel members came from different components of the field with different perspectives

on the tasks reviewed, i.e., one would not expect perfect correlation given these background differences. Appendix F contains the Repeated Measures Analysis of Variance tables used to remove non-rater variance in the calculation of the reliability coefficient.

Observations, Conclusions, and Suggestions

This initiative demonstrates ground breaking exploration into measurement related to extent of harm from practice of a profession—in this case, practice of the athletic trainer profession. In essence, thie initiative has built and improved upon the design of an instrument that can be used to evaluate extent of harm under incompetent vs. competent conditions. The results of the exercise to date suggests that the instrument can be used to discriminate between competent and incompetent individuals in terms of the likelihood of various types of injuries resulting from task performance.

Work has yet to be done, however, and several cautions are in order. First, the process and timing of this work suggests that additional work still needs to be undertaken to ascertain whether—given the availability of existing incident data—that accident or injury scenarios could be used to focus the questioning and therefore result in a more effective instrument. While there has been much discussion both within the panel meeting and among the study consultants regarding the use of "accident" vs. "task" oriented scenarios in developing the risk of harm questionnaire, the considered professional judgment is that "task-oriented" scenarios probably enhance the validity of the instrument, particularly given that professionals practice in different settings within the field and are likely through their various practices to deal with scenarios that may vary in terms of numbers and experiences in dealing with them. The use of tasks provide focus for drawing together these various perspectives, thus possibly resulting in a more valid product. Nonetheless, further discussion of this issue appears in order with professionals in the field and in the medical community.

This issue aside, the process used to construct this instrument—while a decent first attempt—suggests needed improvements. Specifically, a tightening of definitions and instructions relating to these definitions, particularly when applied to the "competent" vs. "incompetent individual and to the "extent of harm" scale is in order. Within this scope of work, these issues were resolved and the questionnaire completed within the same setting. Ideally, they need separation in order to provide first for 1) a more considered, focused discussion of the issues, 2) a considered refinement of the instrument relating from these discussions, and 3) a considered, thoughtful test taking session.

In addition, input into the construction of the instrument needs to be broadened beyond the ten professionals involved in this effort. Further refinements in instrument construction coupled with additional ratings from a much broader population of professionals is necessary in order not only to ensure reliability of the measurement obtained to date, but also hopefully to increase the reliability.

Also, obtaining ratings from "uncertified" as well as "certified" athletic trainers would further help to establish the reliability of the instrument. Specifically, the measurement obtained to date would statistically be considered "truncated"—reflective of only one portion of the population considered for licensure—the certified professional. To contribute to wider, more heterogeneous response, and therefore, result in greater reliability, the uncertified individual should be included in future rating panels.

Finally, it should be emphasized that while this measurement process has helped establish the risk of harm from the practice of the athletic trainer profession under different conditions—incompetent vs. incompetent, it would be helpful to understand harm from another type of probability—the probability that a client receives treatment at the hands of a "competent" vs. an "uncompetent" individual. Here, greater knowledge of the field appears in order, i.e., exactly how many uncertified individuals are there who practice, what type of training do they possess, if any, what percentage of the total practice do they reflect, where are they located, and so forth. Such knowledge would help "round out" the existing work that has been done to date regarding this very critical issue of potential public harm resulting from the professional practice of the athletic trainer.

APPENDIX A

AGENDA AND PARTICIPANTS
MEETING 1

AGENDA:
RISK OF HARM EVALUATION
ATHLETIC TRAINERS IN VIRGINIA
August 5, 1998
1:00p.m-3:00p.m.
Richmond, Virginia

The Issue—Licensure for Athletic Trainers in Virginia—Relative Harm
--from licensing—barrier
--from not licensing—potential of harm to the public

RDI's Responsibility—To develop an instrument to assess the risk of harm to the public that could occur from the practice of the profession

- we will build an Assessment Instrument to be "evaluated" at August 14th meeting
- want to make certain that those who have had input into this evaluation provide
- adequate representation of the athletic training profession as it is practiced in the state of Virginia—
- therefore, we need to ensure state-wide representativeness in the professionals who will serve on this panel.....
- need your help in building this instrument

Professional Practice Situations that Might Result in Harm to the Public

- intensity of the injury, and therefore, resulting harm
- frequency/likelihood of the injury occurring given the practice of the profession

Extent of Harm Scale—Review and Comment (In Development)

Participants
Risk of Harm Evaluation Meeting
August 5, 1998

Steven Cole, Director of Sports Medicine
The College of William and Mary
Williamsburg, Virginia

David Pawlowski, Executive Director
Virginia Athletic Trainers Association
Richmond, Virginia

Cathy Wright, Lobbyist
Virginia Athletic Trainers Association
Castleman & Graziano
Richmond, Virginia

Measurement Team:

Dr. Ann Parker Maust
Research Dimensions, Inc.

Dr. Jim C. Fortune
Virginia Polytechnic Institute and State University

APPENDIX B

RISK OF HARM QUESTIONNAIRE, INCLUDING INSTRUCTIONS

EVALUATION OF POTENTIAL PUBLIC HARM RESULTING FROM THE PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

PANEL MEETING

Conducted by:

Research Dimensions, Inc.
1108 East Main Street, Suite 1000
Richmond, Virginia

Conducted for:

Board of Health Professions
Department of Health Professions
Commonwealth of Virginia
6608 West Broad Street, Fourth Floor
Richmond, Virginia 23230

August 14, 1998

EVALUATION OF POTENTIAL PUBLIC HARM
RESULTING FROM THE
PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

Athletic trainers engage in a number of tasks in the practice of their profession. Could you please review the following statements and provide two responses for each:

- First, a response related to the potential harm that could result to the client in the performance of this task, and
- Second, a response estimating the likelihood that this harm will occur either in terms of the percentage of times that the task is performed or the percentage of clients that are treated.

Please respond by placing an X in the appropriate cell. Each task statement should result in two Xs being placed in the cells to the right—one X in the "Extent of Harm" category, the other X in the "Likelihood of Occurrence" category. If you do not know how to respond or feel that you have insufficient knowledge to make one or both of the responses please mark an X in the "Unable to Respond" cell.

The response stems for the EXTENT OF HARM category may be further explained as follows:

1. No Harm
2. Loss or Inconvenience, but No Injury—Task Performance May Result in Financial Loss or Some Form of Inconvenience to Client, but Not Injury
3. Minor Injury—Task Performance May Result in Injury Which Likely Will Be Completely Reversed
4. Debilitating Injury that Results in Physical and/or Emotional Harm—Task Performance May Result in a Debilitating Injury Where Physical and/or Emotional Harm May Be Observed Immediately or Discovered at Some Future Point
5. Severe Injury—Task Performance May Result in Severe Injury Which Results in Loss of Permanent Significant Function
6. Life Threatening Injury

7. Death

EVALUATION OF POTENTIAL PUBLIC HARM RESULTING FROM THE PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

The response stems for the LIKELIHOOD OF OCCURRENCE are explained in terms of either the percentage of times that the task is performed or the percentage of clients that are treated:

1. Less than 1% --of the times that the task is performed or that clients are treated.
2. 1% to 25%-
3. 26% to 50%
4. 51% to 75%
5. 76% to 99%
6. More than 99%

DEMOGRAPHICS

(Please check all that apply)

Physician	Yes ___	No____
ATC	Yes___	No____
Physical Therapist	Yes___	No____

ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 1. TASKS PREVENTION OF ATHLETIC INJURIES	EXTENT OF HARM							LIKELIHOOD OF OCCURRENCE						UTD
	1	2	3	4	5	6	7	1	2	3	4	5	6	
1. Identify physical conditions predisposing the athlete or physically active individual to increased risk of injury/ illness in athletic activity by following accepted pre-participation examination guidelines in order to ensure safe participation.														
2. Supervise conditioning programs and testing for athletes or physically active individuals using mechanical and/or other techniques in order to ensure readiness for safe participation in physical activity.														
3. Monitor environmental conditions, e.g., temperature, humidity, lighting, of playing or practice areas by following accepted guidelines in order to make recommendations regarding safe participation														
4. Assess athletic apparatuses and athletic activity areas, e.g., playing surfaces, gyms, locker and athletic training room facilities by periodic inspection and review of maintenance records to ensure a safe environment														

SCALE

EXTENT OF HARM

1. **No Loss, Inconvenience, or Injury**
2. **Loss or Inconvenience, but No Injury**
3. **Minor Injury**
4. **Debilitating Injury**
5. **Severe Injury Resulting In Loss of Permanent Significant Function**
6. **Life Threatening Injury**
7. **Death**

LIKELIHOOD OF OCCURRENCE:

1. **Less than 1%**
2. **1% to 25%**
3. **26% to 50%**
4. **51% to 75%**
5. **76% to 99%**
6. **More than 99%**

UTD= UNABLE TO DETERMINE

ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 1. TASKS (continued) PREVENTION OF ATHLETIC INJURIES	EXTENT OF HARM							LIKELIHOOD OF OCCURRENCE						UTD
	1	2	3	4	5	6	7	1	2	3	4	5	6	
5. Construct custom protective devices by fabricating and fitting appropriate materials in order to protect specific parts of the body from injury during athletic activity.														
6. Apply specific and appropriate taping, wrapping, or prophylactic devices to the athlete or physically active individual by adhering to principles of biomechanics and injury mechanism in order to prevent injury or reinjury.														
7. Evaluate the use and maintenance of protective devices and athletic equipment e.g., helmets, shoulder pads, shin guards, by inspecting and assessing the equipment in order to ensure optimal protection of the athlete or physically active individual.														
8. Educate parents, staff, coaches, athletes, etc., about the risks associated with participation and unsafe practices using direct communication in order to provide an opportunity for them to make an informed decision concerning physical activity.														

SCALE

EXTENT OF HARM

1. **No Loss, Inconvenience, or Injury**
2. **Loss or Inconvenience, but No Injury**
3. **Minor Injury**
4. **Debilitating Injury**
5. **Severe Injury Resulting in Loss of Permanent Significant Function**
6. **Life Threatening Injury**
7. **Death**

LIKELIHOOD OF OCCURRENCE:

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2. **1% to 25%**
3. **26% to 50%**
4. **51% to 75%**
5. **76% to 99%**
6. **More than 99%**

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ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 2. TASKS RECOGNITION, EVALUATION AND IMMEDIATE CARE OF ATHLETIC INJURIES	EXTENT OF HARM							LIKELIHOOD OF OCCURRENCE						UTD
	1	2	3	4	5	6	7	1	2	3	4	5	6	
1. Obtain a history from the athlete or physically active individual or witnesses through observation and interview in order to determine the pathology and extent of injury/illness.														
2. Inspect the involved area using bilateral comparison, if appropriate, in order to determine the extent of the injury/illness.														
3. Palpate the involved area using knowledge of human anatomy in order to determine the extent of the injury/illness.														
4. Perform specific tests on the involved area drawing on knowledge of anatomy, physiology, biomechanics, etc., in order to determine the extent of the injury/illness														

SCALE

EXTENT OF HARM

1. **No Loss, Inconvenience, or Injury**
2. **Loss or Inconvenience, but No Injury**
3. **Minor Injury**
4. **Debilitating Injury**
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ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 2. TASKS (continued) RECOGNITION, EVALUATION, AND IMMEDIATE CARE OF ATHLETIC INJURIES	EXTENT OF HARM							LIKELIHOOD OF OCCURRENCE						UTD
	1	2	3	4	5	6	7	1	2	3	4	5	6	
5. Determine the appropriate course of action by interpreting the signs and symptoms of the injury/illness in order to provide the necessary immediate care.														
6. Administer first aid using standard, approved techniques and activate the emergency plan, if appropriate, in order to provide necessary medical care.														
7. Select and apply emergency equipment following standard, approved techniques in order to facilitate the athlete or physically active individual's safe, proper, and efficient transportation														
8. Refer the athlete or physically active indivdiual to the appropriate medical personnel and/or facility using standard procedures to continue proper medical care														

SCALE

EXTENT OF HARM

1. No Loss, Inconvenience, or Injury
2. Loss or Inconvenience, but No Injury
3. Minor Injury
4. Debilitating Injury
5. Severe Injury Resulting In Loss of Permanent Significant Function
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ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 3. TASKS REHABILITATION AND RECONDITIONING OF ATHLETIC INJURIES	EXTENT OF HARM							LIKELIHOOD OF OCCURRENCE						UTD
	1	2	3	4	5	6	7	1	2	3	4	5	6	
1. Identify injury/illness status by using standard techniques for evaluation and re-assessment in order to determine appropriate rehabilitation programs.														
2. Construct rehabilitation/reconditioning programs for the injured/ill athlete or physically active individual using standard procedures for therapeutic exercise and modalities in order to restore functional status.														
3. Select appropriate rehabilitation equipment, manual techniques, and therapeutic modalities by evaluating the theory and use as defined by accepted standards of care in order to enhance recovery.														

SCALE

EXTENT OF HARM

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ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 3. TASKS (continued) REHABILITATION AND RECONDITIONING OF ATHLETIC INJURIES	EXTENT OF HARM							LIKELIHOOD OF OCCURRENCE						UTD
	1	2	3	4	5	6	7	1	2	3	4	5	6	
4. Administer rehabilitation techniques and procedures to the injured/ill athlete or physically active individual by applying accepted standards of care and protocols in order to enhance recovery.														
5. Evaluate the readiness of the injured/ill athlete or physically active individual by assessing functional status in order to ensure a safe return to participation.														
6. Educate parents, staff, coaches, athletes, physically active individuals, etc., about the rehabilitation process using direct communication in order to enhance rehabilitation.														

SCALE

EXTENT OF HARM

1. No Loss, Inconvenience, or Injury
2. Loss or Inconvenience, but No Injury
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UTD= UNABLE TO DETERMINE

ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 4. TASKS HEALTH CARE ADMINISTRATION	EXTENT OF HARM							LIKELIHOOD OF OCCURRENCE						UTD
	1	2	3	4	5	6	7	1	2	3	4	5	6	
1. Maintain the health care records of the athlete or physically active individual using a recognized, comprehensive recording process in order to document procedures/services rendered by health care professionals.														
2. Comply with safety and sanitation standards by maintaining facilities and equipment in order to ensure a safe environment.														
3. Manage daily operations by implementing and maintaining standards for all personnel in order to ensure quality of service.														
4. Establish written guidelines for injury/illness management by standardizing operating procedures in order to provide a consistent quality of care.														

SCALE

EXTENT OF HARM

1. **No Loss, Inconvenience, or Injury**
2. **Loss or Inconvenience, but No Injury**
3. **Minor Injury**
4. **Debilitating Injury**
5. **Severe Injury Resulting in Loss of Permanent Significant Function**
6. **Life Threatening Injury**
7. **Death**

LIKELIHOOD OF OCCURRENCE:

1. **Less than 1%**
2. **1% to 25%**
3. **26% to 50%**
4. **51% to 75%**
5. **76% to 99%**
6. **More than 99%**

UTD= UNABLE TO DETERMINE

ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 4. TASKS (continued) HEALTH CARE ADMINISTRATION	EXTENT OF HARM							LIKELIHOOD OF OCCURRENCE						UTD
	1	2	3	4	5	6	7	1	2	3	4	5	6	
5. Obtain equipment and supplies by evaluating reliable product information in order to provide athletic training services for athletes and physically active individuals.														
6. Create a plan which includes emergency, management, and referral systems specific to the setting involving appropriate health care professionals in order to facilitate proper care.														
7. Reduce the risk of exposure to infectious agents by following universal precautions in order to prevent the transmission of infectious diseases.														

SCALE

EXTENT OF HARM

1. No Loss, Inconvenience, or Injury
2. Loss or Inconvenience, but No Injury
3. Minor Injury
4. Debilitating Injury
5. Severe Injury Resulting in Loss of Permanent Significant Function
6. Life Threatening Injury
7. Death

LIKELIHOOD OF OCCURRENCE:

1. Less than 1%
2. 1% to 25%
3. 26% to 50%
4. 51% to 75%
5. 76% to 99%
6. More than 99%

UTD= UNABLE TO DETERMINE

ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 5. PROFESSIONAL DEVELOPMENT AND RESPONSIBILITY TASKS	EXTENT OF HARM							LIKELIHOOD OF OCCURRENCE						UTD
	1	2	3	4	5	6	7	1	2	3	4	5	6	
1. Maintain knowledge of contemporary sports medicine issues by participating in continuing education activities in order to provide an appropriate standard of care.														
2. Develop interpersonal communication skills by interacting with others e.g., parents, coaches, colleagues, athletes, physically active individuals, in order to enhance proficiency and professionalism.														
3. Adhere to ethical and legal parameters by following established guidelines which define the proper role of the certified athletic trainer in order to protect athletes, physically active individuals, and the public.														
4. Assimilate appropriate sports medicine research by using available resources in order to enhance professional growth.														
5. Educate the public by serving as a resource in order to enhance awareness of the roles and responsibilities of the certified athletic trainer.														

SCALE

EXTENT OF HARM

1. **No Loss, Inconvenience, or Injury**
2. **Loss or Inconvenience, but No Injury**
3. **Minor Injury**
4. **Debilitating Injury**
5. **Severe Injury Resulting in Loss of Permanent Significant Function**
6. **Life Threatening Injury**
7. **Death**

LIKELIHOOD OF OCCURRENCE:

1. **Less than 1%**
2. **1% to 25%**
3. **26% to 50%**
4. **51% to 75%**
5. **76% to 99%**
6. **More than 99%**

UTD= UNABLE TO DETERMINE

APPENDIX C

AGENDA AND PANELISTS
MEETING 2

AGENDA

Panel Meeting
Evaluation of Potential Harm to the Public
from the Professional Practice of the
Athletic Trainer
August 14, 1998

9:00 a.m.- 9:15a.m.	Assembly, Coffee
9:15 a.m.- 9:45a.m.	Overview: Purpose of the Meeting: Risk of Public Harm as an Evaluation Criteria for Licensure in the Commonwealth --The Risk of Harm Questionnaire--Its Design and Use --Function of the Panel --Distribution of the Questionnaire and Review of Instructions for Completion --Questions and Answers
9:45a.m.-11:00 a.m.	Panel Member Completion of the Questionnaire: Round 1
11:00a.m.-12:00 noon	Debriefing Session: Reaction to and Discussion of Items
12:00p.m.- 1:00p.m.	Lunch
1:00p.m.- 2:00p.m.	Panel Member Completion of the Questionnaire: Round 2
2:00p.m.	Adjournment

EVALUATION OF POTENTIAL HARM TO THE PUBLIC
FROM THE PROFESSIONAL PRACTICE
OF THE
ATHLETIC TRAINER
PANELISTS

Dr. Joseph Gieck
Physical Therapist, Athletic Trainer Certified (ATC)
University of Virginia
Charlottesville, Virginia

Dr. Joseph Ornato, Chair
Emergency Medicine
Medical College of Virginia
Richmond, Virginia

Dr. Thomas Loughran, Orthopedist
Sports Medicine
Medical College of Virginia
Richmond, Virginia

Dr. Douglas Cutter, Family Practice Physician (invited, not present)
Chippenham Hospital Sports Medicine
Richmond, Virginia

George Borden, ATC
Curriculum Coordinator, Head Athletic Trainer
Virginia Commonwealth University
Richmond, Virginia

Chad Byler, ATC
Head Athletic Trainer
Norfolk Academy
Norfolk, Virginia

Brent Arnold, ATC
Curriculum Director,
Sports Medicine
University of Virginia
Charlottesville, Virginia

Jon Almquist, ATC
Head Athletic Trainer
George Marshall High School
Coordinator, Sports Medicine
Fairfax County School System
Fairfax County, Virginia

Brian Hoke, Physical Therapist
Atlantic Physical Therapy
Virginia Beach, Virginia

Measurement Team:

Dr. Ann Parker Maust
Research Dimensions, Inc.
Dr. Jim Fortune
Virginia Polytechnic Institute and State University

APPENDIX D

RISK OF HARM QUESTIONNAIRE
(REVISED WITH PANEL MEMBER COMMENTS)

REVISED QUESTIONNAIRE
BASED ON PANEL DISCUSSION

Overview of Revisions

Based on general panel member consensus the Risk of Harm Questionnaire was revised in several ways. Specifically, the Likelihood of Occurrence Scale as originally designed was eliminated. Also, the Extent of Harm Scale was revised to include four as opposed to seven categories. The general consensus was that life threatening injury and death should be combined; debilitating and severe injury should be combined; and minor injury or financial loss/inconvenience should be combined.

Given these revisions, panelists concurred that probabilities should be assigned to each task to reflect the likelihood of a minor injury or loss occurring, a severe or debilitatir injury occurring, or a life threatening injury or death resulting. All probabilities assigne to each task should add to 100%.

ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 1. TASKS PREVENTION OF ATHLETIC INJURIES	EXTENT OF HARM							LIKELIHOOD OF OCCURRENCE						UTD
	1	2	3	4	5	6	7	1	2	3	4	5	6	
1. Identify physical conditions predisposing the athlete or physically active individual to increased risk of injury/ illness in athletic activity by following accepted pre-participation examination guidelines in order to ensure safe participation.														
2. Supervise conditioning programs and testing for athletes or physically active individuals using mechanical and/or other techniques in order to ensure readiness for safe participation in physical activity.														
3. Monitor environmental conditions, e.g., temperature, humidity, lighting, of playing or practice areas by following accepted guidelines in order to make recommendations regarding safe participation														
4. Assess athletic apparatuses and athletic activity areas, e.g., playing surfaces, gyms, locker and athletic training room facilities by periodic inspection and review of maintenance records to ensure a safe environment														

SCALE

EXTENT OF HARM

1. **No Loss, Inconvenience, or Injury**
2. **Loss or Inconvenience, but No Injury**
3. **Minor Injury**
4. **Debilitating Injury**
5. **Severe Injury Resulting in Loss of Permanent Significant Function**
6. **Life Threatening Injury**
7. **Death**

LIKELIHOOD OF OCCURRENCE:

1. **Less than 1%**
2. **1% to 25%**
3. **26% to 50%**
4. **51% to 75%**
5. **76% to 99%**
6. **More than 99%**

UTD= UNABLE TO DETERMINE

ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 1. TASKS (continued) PREVENTION OF ATHLETIC INJURIES	EXTENT OF HARM 1	2	3	4	5	6	7	LIKELIHOOD OF OCCURRENCE 1	2	3	4	5	6	UTD
5. Construct custom protective devices by fabricating and fitting appropriate materials in order to protect specific parts of the body from injury during athletic activity.														
6. Apply specific and appropriate taping, wrapping, or prophylactic devices to the athlete or physically active individual by adhering to principles of biomechanics and injury mechanism in order to prevent injury or reinjury.														
7. Evaluate the use and maintenance of protective devices and athletic equipment e.g., helmets, shoulder pads, shin guards, by inspecting and assessing the equipment in order to ensure optimal protection of the athlete or physically active individual.														
8. Educate parents, staff, coaches, athletes, etc., about the risks associated with participation and unsafe practices using direct communication in order to provide an opportunity for them to make an informed decision concerning physical activity.														

SCALE

EXTENT OF HARM

1. No Loss, Inconvenience, or Injury
2. Loss or Inconvenience, but No Injury
3. Minor Injury
4. Debilitating Injury
5. Severe Injury Resulting in Loss of Permanent Significant Function
6. Life Threatening Injury
7. Death

LIKELIHOOD OF OCCURRENCE:

1. Less than 1%
2. 1% to 25%
3. 26% to 50%
4. 51% to 75%
5. 76% to 99%
6. More than 99%

UTD= UNABLE TO DETERMINE

ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 2. TASKS RECOGNITION, EVALUATION AND IMMEDIATE CARE OF ATHLETIC INJURIES	EXTENT OF HARM 1	2	3	4	5	6	7	LIKELIHOOD OF OCCURRENCE 1	2	3	4	5	6	UTD
1. Obtain a history from the athlete or physically active individual or witnesses through observation and interview in order to determine the pathology and extent of injury/illness.														
2. Inspect the involved area using bilateral comparison, if appropriate, in order to determine the extent of the injury/illness.														
3. Palpate the involved area using knowledge of human anatomy in order to determine the extent of the injury/illness.														
4. Perform specific tests on the involved area drawing on knowledge of anatomy, physiology, biomechanics, etc., in order to determine the extent of the injury/illness														

SCALE

EXTENT OF HARM

(1)
1. No Loss, Inconvenience, or Injury
2. Loss or Inconvenience, but No Injury

(2)
3. Minor Injury
4. Debilitating Injury

(3)
5. Severe Injury Resulting in Loss of Permanent Significant Function

(4)
6. Life Threatening Injury
7. Death

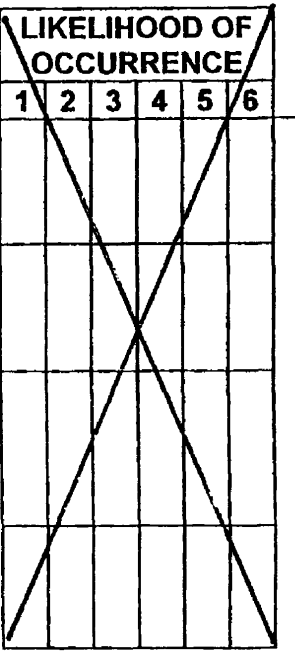
LIKELIHOOD OF OCCURRENCE:

1. Less than 1%
2. 1% to 25%
3. 26% to 50%
4. 51% to 75%
5. 76% to 99%
6. More than 99%

UTD= UNABLE TO DETERMINE

ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 2. TASKS (continued) RECOGNITION, EVALUATION, AND IMMEDIATE CARE OF ATHLETIC INJURIES	EXTENT OF HARM 1	2	3	4	5	6	7	LIKELIHOOD OF OCCURRENCE 1	2	3	4	5	6	UTD
5. Determine the appropriate course of action by interpreting the signs and symptoms of the injury/illness in order to provide the necessary immediate care.														
6. Administer first aid using standard, approved techniques and activate the emergency plan, if appropriate, in order to provide necessary medical care.														
7. Select and apply emergency equipment following standard, approved techniques in order to facilitate the athlete or physically active individual's safe, proper, and efficient transportation														
8. Refer the athlete or physically active indivdiual to the appropriate medical personnel and/or facility using standard procedures to continue proper medical care														



SCALE

EXTENT OF HARM

1. No Loss, Inconvenience, or Injury
2. Loss or Inconvenience, but No Injury
3. Minor Injury
4. Debilitating Injury
5. Severe Injury Resulting in Loss of Permanent Significant Function
6. Life Threatening Injury
7. Death

LIKELIHOOD OF OCCURRENCE:

1. Less than 1%
2. 1% to 25%
3. 26% to 50%
4. 51% to 75%
5. 76% to 99%
6. More than 99%

UTD= UNABLE TO DETERMINE

ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 3. TASKS REHABILITATION AND RECONDITIONING OF ATHLETIC INJURIES	EXTENT OF HARM							LIKELIHOOD OF OCCURRENCE						UTD
	1	2	3	4	5	6	7	1	2	3	4	5	6	
1. Identify injury/illness status by using standard techniques for evaluation and re-assessment in order to determine appropriate rehabilitation programs.														
2. Construct rehabilitation/reconditioning programs for the injured/ill athlete or physically active individual using standard procedures for therapeutic exercise and modalities in order to restore functional status.														
3. Select appropriate rehabilitation equipment, manual techniques, and therapeutic modalities by evaluating the theory and use as defined by accepted standards of care in order to enhance recovery.														

SCALE

EXTENT OF HARM

1. **No Loss, Inconvenience, or Injury**
2. **Loss of Inconvenience, but No Injury**
3. **Minor Injury**
4. **Debilitating Injury**
5. **Severe Injury Resulting in Loss of Permanent Significant Function**
6. **Life Threatening Injury**
7. **Death**

LIKELIHOOD OF OCCURRENCE:

1. **Less than 1%**
2. **1% to 25%**
3. **26% to 50%**
4. **51% to 75%**
5. **76% to 99%**
6. **More than 99%**

UTD= UNABLE TO DETERMINE

ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 3. TASKS (continued) REHABILITATION AND RECONDITIONING OF ATHLETIC INJURIES	EXTENT OF HARM 1	2	3	4	5	6	7	LIKELIHOOD OF OCCURRENCE 1	2	3	4	5	6	UTD
4. Administer rehabilitation techniques and procedures to the injured/ill athlete or physically active individual by applying accepted standards of care and protocols in order to enhance recovery.														
5. Evaluate the readiness of the injured/ill athlete or physically active individual by assessing functional status in order to ensure a safe return to participation.														
6. Educate parents, staff, coaches, athletes, physically active individuals, etc., about the rehabilitation process using direct communication in order to enhance rehabilitation.														

SCALE

EXTENT OF HARM

1. No Loss, Inconvenience, or Injury
2. Loss or Inconvenience, but No Injury
3. Minor Injury
4. Debilitating Injury
5. Severe Injury Resulting In Loss of Permanent Significant Function
6. Life Threatening Injury
7. Death

LIKELIHOOD OF OCCURRENCE:

1. Less than 1%
2. 1% to 25%
3. 26% to 50%
4. 51% to 75%
5. 76% to 99%
6. More than 99%

UTD= UNABLE TO DETERMINE

ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 4. TASKS HEALTH CARE ADMINISTRATION	EXTENT OF HARM							LIKELIHOOD OF OCCURRENCE						UTD
	1	2	3	4	5	6	7	1	2	3	4	5	6	
1. Maintain the health care records of the athlete or physically active individual using a recognized, comprehensive recording process in order to document procedures/services rendered by health care professionals.														
2. Comply with safety and sanitation standards by maintaining facilities and equipment in order to ensure a safe environment.														
3. Manage daily operations by implementing and maintaining standards for all personnel in order to ensure quality of service.														
4. Establish written guidelines for injury/illness management by standardizing operating procedures in order to provide a consistent quality of care.														

SCALE

EXTENT OF HARM

1. **No Loss, Inconvenience, or Injury**
2. **Loss or Inconvenience, but No Injury**
3. **Minor Injury**
4. **Debilitating Injury**
5. **Severe Injury Resulting in Loss of Permanent Significant Function**
6. **Life Threatening Injury**
7. **Death**

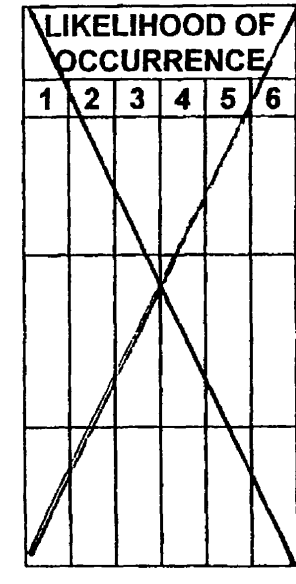
LIKELIHOOD OF OCCURRENCE:

1. **Less than 1%**
2. **1% to 25%**
3. **26% to 50%**
4. **51% to 75%**
5. **76% to 99%**
6. **More than 99%**

UTD= UNABLE TO DETERMINE

ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 4. TASKS (continued) HEALTH CARE ADMINISTRATION	EXTENT OF HARM							LIKELIHOOD OF OCCURRENCE						UTD
	1	2	3	4	5	6	7	1	2	3	4	5	6	
5. Obtain equipment and supplies by evaluating reliable product information in order to provide athletic training services for athletes and physically active individuals.														
6. Create a plan which includes emergency, management, and referral systems specific to the setting involving appropriate health care professionals in order to facilitate proper care.														
7. Reduce the risk of exposure to infectious agents by following universal precautions in order to prevent the transmission of infectious diseases.														



SCALE

EXTENT OF HARM

(1)
1. No Loss, Inconvenience, or Injury
2. Loss or Inconvenience, but No Injury

(2)
3. Minor Injury
4. Debilitating Injury

(3)
5. Severe Injury Resulting in Loss of Permanent Significant Function

(4)
6. Life Threatening Injury
7. Death

LIKELIHOOD OF OCCURRENCE:

1. Less than 1%
2. 1% to 25%
3. 26% to 50%
4. 51% to 75%
5. 76% to 99%
6. More than 99%

UTD= UNABLE TO DETERMINE

ASSESSMENT OF RISK OF HARM FROM PROFESSIONAL PRACTICE OF THE ATHLETIC TRAINER

DOMAIN 5. PROFESSIONAL DEVELOPMENT AND RESPONSIBILITY TASKS	EXTENT OF HARM							LIKELIHOOD OF OCCURRENCE						UTD
	1	2	3	4	5	6	7	1	2	3	4	5	6	
1. Maintain knowledge of contemporary sports medicine issues by participating in continuing education activities in order to provide an appropriate standard of care.														
2. Develop interpersonal communication skills by interacting with others e.g., parents, coaches, colleagues, athletes, physically active individuals, in order to enhance proficiency and professionalism.														
3. Adhere to ethical and legal parameters by following established guidelines which define the proper role of the certified athletic trainer in order to protect athletes, physically active individuals, and the public.														
4. Assimilate appropriate sports medicine research by using available resources in order to enhance professional growth.														
5. Educate the public by serving as a resource in order to enhance awareness of the roles and responsibilities of the certified athletic trainer.														

SCALE

EXTENT OF HARM

(1) 1. No Loss, Inconvenience, or Injury

(2) 2. Loss or Inconvenience, but No Injury
3. Minor Injury

(3) 4. Debilitating Injury
5. Severe Injury Resulting in Loss of Permanent Significant Function

(4) 6. Life Threatening Injury
7. Death

LIKELIHOOD OF OCCURRENCE:

1. Less than 1%
2. 1% to 25%
3. 26% to 50%
4. 51% to 75%
5. 76% to 99%
6. More than 99%

UTD= UNABLE TO DETERMINE

PANEL MEMBER COMMENTS
RISK OF HARM QUESTIONNAIRE

Panelists were asked for their written comments on the Risk of Harm Questionnaire. After discussion, they completed the *revised* Risk of Harm Questionnaire and were asked to provide comments about this questionnaire if they would like. The following comments were provided.

Physician

First Instrument

1. The scale for likelihood of harm should have been from 0 to 100 not as categories. This was particularly problematic for the 1-25% category. Too large a spread!

2. There is always a remote risk of death from almost any act, directly or indirectly. Thus, the questionnaire would have been better designed using the following approach.

   Rate each on a scale of 1 to 100

   Risk of minor injury/loss→ → → → Risk of Death

3. I don't think that this process/questionnaire is doing justice to the question at hand. Specific case examples would have been a useful way to discriminate the likely behavior of certified/non certified trainers.

Physician

1. The questions need to be directed to a specific case scenario. Questions too vague. Too much leeway for interpretation.

2. My answers were going to fall in all or none category, i.e., less than 1%--especially to extent of harm issue.

3. ..... system also often too subjective
4. ....also redundant information

2nd Instrument

1. Would incorporate actual case scenarios in decision making to cover incidents ranging from minor injuries to potential catastrophic injuries. Four case scenarios would be enough.

Physical Therapist

In answering specific items on the survey, the "risk of harm" can be quite variable given the same error in judgment by the athletic trainer. For example, not recognizing a fractured thumb has very real consequences for the public, but not recognizing a subdural hematoma has much graver consequences.

This then also transferred to likelihood of harm, in that a fractured thumb is a common occurrence in athletics, but a subdural hematoma is rare. I found it difficult to "play the middle" and determine what "average" harm we wanted to assess.

Final Concerns, 2nd instrument

The revised way to resolve the issues of varying severity of injuries is better, but is assuming a reasonably accurate, knowledge of the incidence/frequency of injuries—hopefully, this is a "safe" assumption.

Physical Therapist-ATC

First Instrument:

Worked all with worst case scenario

Domain 5, #2, proficiency definition was ?

Scales.....extent of harm-4

ATC

1. A clearer definition of who is being evaluated.
   --many of the questions can be responded to very differently when comparing the ATC vs. the unqualified individual. I am confident that some items would never be completed by unqualified personnel and would always be completed by certified personnel.

2. The likelihood score needs to be clarified.
   --Likelihood of screwing up the task of the likelihood that it will be done correctly? or the likelihood that it will be done at all?

   --I am very concerned that the respondents did not respond from the point of view of the potential of harm, but rather they answered from the point of view of the likelihood of a licensed professional completing the task.

3. 2nd Instrument
   --The responses may vary based on the injury involved. I would suggest perhaps a common scenario by which the competent vs. incompetent might be judged.

ATC

1. My major concern is the definition of athletic trainer certified vs. uncertified.
2. Potential of harm will vary from sport to sport. Collision (contact) vs. non-contact. Also, level of play—youth to professional. We seem to be mainly working with high schools.

3. Range of % greatly vary—better scale (needed (sic))

4. 2nd instrument. Need to identify and define "incompetent trainer" who are they and where do they operate.

5. Survey Virginia secondary high schools and identify trainer. Who fills position? ATC, Coach, EMT, nurse, volunteer, teacher, other.....survey Virginia colleges/universities and trainer staffs.

ATC

The questions evaluating the first three domains were applicable, but the questions re....domain four were difficult to assess. The difficulty I found was with the likeliness of occurrence. It was unclear whether it was the likelihood of the person performing the task or the likelihood of the harm occurring.

The extent ot harm category is also ambiguous. It will definitely vary depending on the knowledge that you have in the field of athletic training. A doctor will perceive this category differently than someone who works with student athletes on a daily basis. In conclusion, the risk of harm is apparent through these questions. However, the likelihood of occurrence should not be taken directly proportional to the extent of harm. Even if harm may occur in less than 1%....harm still exists. Also, 1-25% is too large of a range. When dealing with extent of harm 1-25% is a large range for low end of occurrence. Suggestion: less than 1%, 1-5%, 5%-20% to 20% to 40%.

ATC

To determine the potential for harm, I used the premise that the "trainer" had minimal education. A considerable amount of the "trainers" working in the high school setting wouldn't know what most of the questions on the form meant.

Domain 1, Question 8----failure to educate coaches on proper first aid techniques (i.e., spine immobilization) can cause death. The situation of the injury doesn't happen often, but the occurrence of improper education is high.

2nd round—was completed (likelihood of occurrence) with the existing "extent of harm" in mind.

Overall concern: It would be beneficial to address the extent of harm with each domain using the same criteria or specifics of the domain. For example: Read the domain, discuss or indicate specifics, then everyone would rank or rate based on the specific case.

APPENDIX E

RATINGS,
TASK DOMAINS 1-5

Domain 1.
Prevention of Athletic Injuries:
Likelihood of the Various Types of Injuries Occurring

TASKS	Incompetent Trainer	Competent Trainer
Minor Injury		
Task 1: Identity Physical Conditions for Risk	57	10
Task 2: Supervise Conditions and Testing	46	6
Task 3: Monitor Conditions	44	8
Task 4: Assess Activity Areas	35	8
Task 5: Determine Course of Action	44	8
Task 6: Apply Appropriate Taping, etc.	50	7
Task 7: Evaluate and Maintain Protective Devices	48	9
Task 8: Educate about Risks	35	7
TOTAL	**45**	**8**
Severe Injury		
Task 1: Identity Physical Conditions for Risk	24	4
Task 2: Supervise Conditions and Testing	21	3
Task 3: Monitor Conditions	14	2
Task 4: Assess Activity Areas	12	3
Task 5: Determine Course of Action	14	3
Task 6: Apply Appropriate Taping, etc.	12	2
Task 7: Evaluate and Maintain Protective Devices	17	3
Task 8: Educate about Risks	13	3
TOTAL	**15**	**3**
Life Threatening Injury or Death		
Task 1: Identity Physical Conditions for Risk	7	1
Task 2: Supervise Conditions and Testing	8	1
Task 3: Monitor Conditions	6	1
Task 4: Assess Activity Areas	2	1
Task 5: Determine Course of Action	2	1
Task 6: Apply Appropriate Taping, etc.	2	1
Task 7: Evaluate and Maintain Protective Devices	3	1
Task 8: Educate about Risks	1	1
TOTAL	**4**	**1**

Domain 2.
Recognition, Evaluation and Immediate Care Tasks:
Likelihood of the Various Types of Injuries Occurring

TASKS	Incompetent Trainer	Competent Trainer
Minor Injury		
Task 1: Obtain History of Athlete	52	12
Task 2: Inspect Area Using Bilateral Comparison	58	8
Task 3: Palpate Area Using Human Anatomy	52	9
Task 4: Perform Specific Tests on Area	52	9
Task 5: Determine Course of Action	58	6
Task 6: Administer First Aid	59	5
Task 7: Select and Apply Emergency Equipment	47	6
Task 8: Refer Athlete to Medical Personnel	51	5
TOTAL	**54**	**8**
Severe Injury		
Task 1: Obtain History of Athlete	22	5
Task 2: Inspect Area Using Bilateral Comparison	20	5
Task 3: Palpate Area Using Human Anatomy	21	2
Task 4: Perform Specific Tests on Area	28	3
Task 5: Determine Course of Action	27	3
Task 6: Administer First Aid	28	3
Task 7: Select and Apply Emergency Equipment	36	3
Task 8: Refer Athlete to Medical Personnel	34	2
TOTAL	**27**	**3**
Life Threatening Injury or Death		
Task 1: Obtain History of Athlete	3	2
Task 2: Inspect Area Using Bilateral Comparison	3	1
Task 3: Palpate Area Using Human Anatomy	2	1
Task 4: Perform Specific Tests on Area	9	1
Task 5: Determine Course of Action	10	1
Task 6: Administer First Aid	10	1
Task 7: Select and Apply Emergency Equipment	21	1
Task 8: Refer Athlete to Medical Personnel	9	1
TOTAL	**8**	**1**

Domain 3.
Rehabilitation and Reconditioning Tasks:
Likelihood of the Various Types of Injuries Occurring

TASKS	Incompetent Trainer	Competent Trainer
Minor Injury		
Task 1:Identify Injury/Illness Status	51	6
Task 2:Construct Rehabilitation Programs	56	7
Task 3:Select Equipment and Techniques	56	6
Task 4:Administer Rehabilitation Procedures	58	6
Task 5:Evaluate Readiness of the Athlete	56	5
Task 6:Educate All Concerned	45	3
TOTAL	**54**	**6**
Severe Injury		
Task 1:Identify Injury/Illness Status	19	2
Task 2:Construct Rehabilitation Programs	16	2
Task 3:Select Equipment and Techniques	17	3
Task 4:Administer Rehabilitation Procedures	21	2
Task 5:Evaluate Readiness of the Athlete	28	2
Task 6:Educate All Concerned	13	1
TOTAL	**19**	**2**
Life Threatening Injury or Death		
Task 1:Identify Injury/Illness Status	3	1
Task 2:Construct Rehabilitation Programs	2	1
Task 3:Select Equipment and Techniques	3	1
Task 4:Administer Rehabilitation Procedures	4	1
Task 5:Evaluate Readiness of the Athlete	2	1
Task 6:Educate All Concerned	1	1
TOTAL	**3**	**1**

Domain 4.
Health Care Administration:
Likelihood of the Various Types of Injuries Occurring

TASKS	Incompetent Trainer	Competent Trainer
Minor Injury		
Task 1:Maintain Health Care Records	34	6
Task 2:Comply with Safety and Sanitary Standards	39	2
Task 3:Manage Daily Operations	32	2
Task 4:Establish Written Guidelines	32	3
Task 5:Obtain Equipment and Supplies	17	2
Task 6:Create a Plan with Referral Systems	35	7
Task 7:Reduce Risk of Exposure to Infections	35	3
TOTAL	**33**	**4**
Severe Injury		
Task 1:Maintain Health Care Records	13	2
Task 2:Comply with Safety and Sanitary Standards	15	1
Task 3:Manage Daily Operations	10	1
Task 4:Establish Written Guidelines	14	2
Task 5:Obtain Equipment and Supplies	5	1
Task 6:Create a Plan with Referral Systems	20	3
Task 7:Reduce Risk of Exposure to Infections	11	1
TOTAL	**12**	**2**
Life Threatening Injury or Death		
Task 1:Maintain Health Care Records	1	1
Task 2:Comply with Safety and Sanitary Standards	1	1
Task 3:Manage Daily Operations	1	1
Task 4:Establish Written Guidelines	1	1
Task 5:Obtain Equipment and Supplies	1	1
Task 6:Create a Plan with Referral Systems	3	1
Task 7:Reduce Risk of Exposure to Infections	2	1
TOTAL	**1**	**1**

Domain 5.
Professional Development:
Likelihood of the Various Types of Injuries Occurring

TASKS	Incompetent Trainer	Competent Trainer
Minor Injury		
Task 1:Maintain Knowledge of Current Issues	27	8
Task 2:Develop Communication Skills	25	8
Task 3:Adhere to Ethical and Legal Standards	23	3
Task 4:Assimilate Sports Medicine Research	28	3
Task 5:Educate all Concerned	35	2
TOTAL	**27**	**5**
Severe Injury		
Task 1:Maintain Knowledge of Current Issues	8	1
Task 2:Develop Communication Skills	6	2
Task 3:Adhere to Ethical and Legal Standards	5	1
Task 4:Assimilate Sports Medicine Research	3	1
Task 5:Educate all Concerned	9	1
TOTAL	**6**	**1**
Life Threatening Injury or Death		
Task 1:Maintain Knowledge of Current Issues	1	1
Task 2:Develop Communication Skills	1	2
Task 3:Adhere to Ethical and Legal Standards	1	1
Task 4:Assimilate Sports Medicine Research	1	1
Task 5:Educate all Concerned	1	1
TOTAL	**1**	**1**

APPENDIX F

REPEATED MEASURES ANALYSIS OF VARIANCE RESULTS FOR CALCULATION OF RELIABILITY

RESULTS:
REPEATED MEASURES
ANALYSIS OF VARIANCE

Tests of Between-Subjects Effects					
Tests of Significance for T1 using UNIQUE Sums of Squares					
Source of Variation	SS	DF	MS	F	Significance of F
WITHIN+RESIDUAL	10.58	506	.02		
RATERS	4.81	7	.69	32.89	.000
SCENARIO	13.56	1	13.56	648.76	.000
RATERS BY SCENARIO	2.57	7	.37	17.59	.000

Tests involving "Harm" Within-Subject Effect					
Tests of Significance for HARM using UNIQUE Sums of Squares					
Source of Variation	SS	DF	MS	F	Significance of F
WITHIN+RESIDUAL	6.67	1012	.01		
HARM	13.90	2	6.95	1054.76	.000
RATERS BY HARM	4.16	14	.30	45.12	.000
SCENARIO BY HARM	8.23	2	4.11	624.70	.000
RATERS BY SCENARIO BY HARM	2.02	14	.14	21.93	.0

Note: Tests involving "Harm" Within-Subject Effect
Mauchly sphericity test, W= .58870
Chi-Square approximately= 267.56963 with 2 D.F.
Significance= .000

Using generalizability theory, a repeated measures analysis of variance was run with two between subject factors (incompetent and competent) and with tasks as the replications.

Reliability is defined as the variance explained by everything except raters (rater variance is eliminated) divided by the total variance (within variance which has the repeated factors taken out). Hence, the reliability is found to be 13.56/24.14 =.56. This reliability is equivalent to a correlation ratio and is across all raters. Application of correction factor assuming sample size of approximately 30 yields a reliability coefficient of approximately .70.

Appendix 9

MALPRACTICE INSURANCE NATIONAL CLAIMS DATA: 1990 FORWARD

NATA Claims Status
Loss Description on Open Claims

Date of Loss: 2/11/94 **Limits of Liability:** $1M/$3M
State: D.C. **Insured Status:** Employed ATC
Location of Loss: School

Description of Loss: Claimant alleges negligence resulting in an infection to his knee causing permanent injury.

Date of Loss: 10/22/94 **Limits of Liability:** $1M/$3M
State: New York **Insured Status:** Employed ATC
Location of Loss: University

Description of Loss: Claimant alleges he sustained serious and severe personal injuries due to insured's negligence.

Date of Loss: 2/2/95 **Limits of Liability:** $1M/$3M
State: New York **Insured Status:** Employed ATC
Location of Loss: Clinic

Description of Loss: While sitting on a rectangular table, using the multiaxial ankle exerciser, claimant leaned back and fell off table. Claimant had performed this same exercise numerous times before this alleged incident.

Date of Loss: 2/8/95 **Limits of Liability:** $1M/$3M
State: New York **Insured Status:** Employed ATC
Location of Loss: Claimant's residence

Description of Loss: Claimant alleges that upon receiving treatment she was caused to fall and sustained a serious and protracted injury.

CLAIMS STATUS REPORT

Claim #	Date Of Loss	Indemnity Reserves	Expenses Incurred	Indemnity Payment	Expenses Paid	Claim Status
32-2-5-18260	11/23/91	$ 0	$ 0	$ 0	$ 816	Closed
32-2-5-18530	11/13/93	0	0	0	0	Closed
32-2-5-17512	4/15/91	0	0	0	0	Closed
32-2-5-70215	3/25/94	0	0	0	0	Closed
32-2-5-41252	9/6/92	0	0	0	0	Closed
32-2-5-12474	2/26/93	0	0	0	0	Closed
32-2-5-74689	9/29/94	0	0	0	0	Closed
32-2-5-75886	10/13/93	9	36,972	0	3,244	Closed
32-2-5-76803	2/2/95	20,000	9,783	0	45,717	Open
32-2-5-80151	3/6/95	0	0	0	0	Closed
32-2-5-83880	4/21/94	0	0	4,000	822	Closed
32-2-5-85077	2/8/95	75,000	3,237	0	41,763	Open
32-2-5-04488	9/20/91	0	0	0	0	Closed
32-2-5-04611	9/13/91	0	0	0	0	Closed
32-2-5-07697	4/29/91	0	0	0	0	Closed
32-2-5-10627	6/24/92	0	0	0	0	Closed
32-2-5-17478	8/1/90	0	0	0	9,786	Closed
32-2-5-70205	9/22/92	0	0	25,000	10,186	Closed

Claim #	Date Of Loss	Indemnity Reserves	Expenses Incurred	Indemnity Payment	Expenses Paid	Claim Status
32-96L010503	10/22/94	5,000	4,378	0	622	Open
32-96L017729	8/25/94	0	0	0	0	Closed
32-96L020225	6/28/94	0	0	0	0	Closed
32-96L030921	10/4/96	0	0	0	0	Closed
32-96L030986	10/8/94	0	0	0	0	Closed
32-97L039287	8/28/96	0	0	0	0	Closed
32-97L048308	4/27/95	0	0	0	0	Closed
32-97L051754	2/11/94	0	0	0	0	Open
32-97L053643	5/16/97	0	0	0	0	Closed
32-2-5-98912	8/13/91	0	0	0	15,452	Closed
32-2-5-02003	6/12/91	0	0	0	804	Closed
32-2-5-18584	5/29/91	0	0	0	1,475	Closed
32-2-5-96592	11/10/90	0	0	0	0	Closed
32-97L0704226	3/28/90	0	0	0	0	Closed
32-2-5-94503	4/20/90	0	0	0	0	Closed
32-2-5-02004	11/14/90	0	0	0	0	Closed
32-96L015315	9/6/94	0	0	0	0	Closed

Claim #	Date Of Loss	Indemnity Reserves	Expenses Incurred	Indemnity Payment	Expenses Paid	Claim Status
32-97L056406	11/1/96	0	0	0	0	Closed
32-97L068921	9/20/96	0	0	0	0	Closed
32-97L069694	10/10/97	0	0	0	0	Closed
32-97L039287	12/31/96	0	0	0	0	Closed
TOTAL		$ 100,027	$ 54,370	$ 29,000	$ 138,687	

Open Claims	4
Closed Claims	35
TOTAL	39

Appendix 10

SOURCES OF DATA FOR QUANTIFYING RISK OF HARM TO CONSUMERS

Sources of Data for Quantifying the Risk of Harm to Consumers

The best data available for developing experience-based methods are the actuarial data on professional liability[2] claims covered by insurers. From this data, the frequency and average size of a claim can be determined.[3] This actuarial data is most readily available from insurance trade associations and actuarial consultants. Some data can also be gleaned from insurer rate filings with State Insurance Departments.

In addition to the actuarial data, there are some sources for data on legal settlements. This data may or may not be included in the figures from insurers. Since it could lead to double counting of claims, it should be reviewed very carefully before adding it to the actuarial data. However, if this data can be obtained, it may be useful to augment the actuarial data.

While actuarial data may be the best data available, it is only available for professions that are currently insured. This limitation makes it less credible for professions that are not currently insured, but it is still the best data available from which extrapolations can be made.

Sources of Data

Three trade associations compile data on professional liability claims, awards or settlements: the Insurance Information Institute (212.669.9200); the Physicians Insurers Association of America (301.947.9000); and the Insurance Services Office (212.898.6000).

When contacted, the Insurance Information Institute (III) provided aggregate market data on medical malpractice carriers from the Institute's *Fact Book*. In addition, the Institute provided us with a copy of the medical malpractice insurance section of its *Insurance Issues Update*. Copies of these items are included as Appendices C and D, respectively. The *Insurance Issues Update* mentions another potential source of data called *Jury Verdict Research*. We have not obtained a copy of that publication.

The Physicians Insurers Association of America (PIAA) compiles data on medical malpractice claims, too. This data can be extracted by health profession from the PIAA database. Health professions are categorized by a 5-digit class code used by professional liability/medical malpractice insurers (see Appendix F). The Association offered to compile the data on all professions, estimating that the effort would probably take 2-3 hours. They would charge $100/hour to conduct the research and would need a detailed data request to do the work. They could provide data on the number and average cost of claims; however, the exposure data (total number of cases from which the data is collected) is not always complete, which would make it difficult to estimate the frequency of a claim.

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[2] The terms professional liability and medical malpractice are sometimes used interchangeably. However, medical malpractice is really a subset of professional liability.

[3] Frequency, in this instance, is defined as the product of the probability that a claim will occur and the number of claims incurred, i.e., the number of times the insurer has to pay an award or settlement. The frequency is defined over a set period—such as a year or month. The average size of the claim is a measure of how much the insurer pays for a claim.

The Insurance Services Office has both frequency and cost data. Like PIAA, they would be willing to respond to a specific data request for a fee. A description of the services available from ISO is included as Appendix E. This information was provided by Mark Strona, an actuary with ISO (212.898.6811).

In addition to the associations, we contacted several medical malpractice carriers. A few carriers would be willing to share data if a specific data request were submitted to them; others are not willing to share their data because it is proprietary. None of the carriers willing to share their data is a significant carrier in the Virginia market.

Actuarial consultants, who prepare rate filings for professional liability and medical malpractice products--such as Mr. James Hurley of Tillinghast (404.365.1632)--also have proprietary databases they have built. Such consultants may be the only credible source—other than actuaries working for professional liability/medical malpractice carriers—for developing factors for previously unclassified health professions. In the situation where a health profession is unclassified, actuarial judgment based on a thorough knowledge of the current provider class system would be critical.

Lastly, the State Insurance Department is a source of data, too. Copies of rate filings may show the relative values of different provider classes that Virginia insurers are using to price their professional liability products.

In summary, the trade associations and State Insurance Departments would be the least expensive source of data; however, they would be limited to providing data on currently insured professions. Actuarial consultants can provide data and analysis more quickly, but at a higher cost. Consultants may also be the only source for the expert knowledge that would be necessary to extrapolate from the existing data to estimate the risk of harm from professions not currently insured.

Appendix 11

PUBLIC COMMENT

June 9, 1998

My name is Clarke Russ, MD.

Thank you for allowing me to address you as a private citizen regarding the licensure of athletic trainers. I want to first tell you a little bit about my background.

I practiced orthopaedic surgery and sports medicine for 30 years. For a long time I was the only physician who was a member in Tidewater of the American Orthopaedic Society for Sports Medicine; the premier physician society for sports medicine in the world.

I founded two physical therapy practices and the first practice in Tidewater featuring a collaboration between physical therapists and athletic trainers. In that practice we had a teaching relationship with Old Dominion University.

This practice successfully developed, nurtured, and financially supported a strategy which over a decade resulted in having an athletic trainer in each of the 10 senior high schools in Virginia Beach, unusual in Virginia. That practice also supported a scholarship program for student athletes, an annual sports medicine seminar for the school system's teachers and coaches, and annual coaching awards.

I wish to suggest an idea which has not been put on your table.

In this era of job analysis and multiskilling we are overlooking a rare opportunity if we don't consider the following:

Merging the educational, professional tracking, licensing and disciplinary functions of physical therapists and athletic trainers.

If a job and educational analysis were done, you would find that the educational content and clinical skills of these two professions are extremely similar.

Both professions developed in a similar way in a similar time period.

The physical therapists from the lay artisans of Sister Kenny and polio days and from the inflow of other allied health professions such as nursing (in the sixties major hospitals still had RN's reviewing their PT departments and

The athletic trainers from sports aficionados and coaches with a special proclivity for injured athletes.

We should encourage and facilitate with other state institutions, as have occurred in other states, the combing of these two professions.

This would:

1. Make the multiskilled individuals a much more useful resource in the healthcare labor force.
2. Save the Commonwealth millions of dollars in educational costs; dollars which are urgently needed elsewhere in the educational system.
3. Eliminate an ugly turf battle which has been raging for at least a decade.
4. Serve as a model to integrate the educational and regulatory efforts of the Commonwealth in meeting future healthcare manpower needs.
5. Introduce proactively rational thought and planning to our efforts; rather than the present reactive response to the self-serving needs of individual professions.

Remember licensure is a state granted franchise. This is a rare opportunity which we should seize.

Norfolk Academy

Elizabeth,

Here is a copy of the six criteria which we addressed for regulation of Athletic Trainers in the commonwealth of Vt. Thank You for all your help

Chad Byler MS ATC

1585 Wesleyan Drive / Norfolk, Virginia 23502-5591 / (757) 461-6236 / Fax (757) 461-1229

QUESTIONS WHICH ADDRESS THE SIX CRITERIA FOR THE REGULATION OF HEALTH OCCUPATIONS

CRITERIA 1: The unregulated practice of an occupation will harm or endanger the health, safety, and welfare of the public. The potential for harm is recognizable and not remote or dependent on tenuous argument.

- **1(a). Describe the functions typically performed by members of this occupational group.**

Of all the professionals responsible for injury prevention and health care provision for the athlete, perhaps none is more intimately involved that the athletic trainer. The athletic trainer is ultimately responsible for the prevention, recognition, evaluation, treatment and rehabilitation of athletic related injuries. These injuries can range from minor cuts and abrasions to various strains and sprains of the musculoskeletal structures. Catastrophic or life-threatening injuries, such as head and neck or heat related injuries, also occur during athletic competition, and must be appropriately recognized, evaluated, and treated. Therefore, the athletic trainer must be knowledgeable and competent in a wide variety of specialty areas if he or she is to be effective in preventing and treating injuries to the athlete.

In 1994, the National Athletic Trainers Association (NATA) completed the Role Delineation Study. This study was designed to identify and define the actual job responsibilities and roles of the athletic trainer. The study divided these responsibilities and duties into five "domains". These five domains include" (1) prevention of athletic injuries, (2) recognition, evaluation and immediate care of athletic injuries, (3) rehabilitation and reconditioning of athletic injuries, (4) health care administration and (5) professional development and responsibility.

The competencies identified within each of these major domains are further classified into behavioral objectives including: (1) cognitive (knowledge and intellectual skills), (2) psychomotor (manipulative and motor skills), and (3) affective (attitudes and values). Each of these areas is important, and all are interrelated. The athletic trainer must develop knowledge and competency in each category to provide athletes with optimal medical care.

An athletic trainer must also be able to combine medical and scientific information in the areas of anatomy, physiology, kinesiology, psychology, exercise physiology, nutrition, and first aid with a wide array of complex practical skills.

I. **PREVENTION OF ATHLETIC INJURIES** - Participation in competitive sports places the physically active in a situation in which injuries are possible at any given time. The best method of managing and caring for athletic injuries is to prevent them from occurring, therefore much of the athletic trainer's time and effort is devoted to preventing injuries. There are several aspects involved in the prevention of athletic injuries. They include:

(a)**Conducting preparticipation physical evaluation/screening** - The athletic trainer, in cooperation with the team physician, is responsible for obtaining a medical history and conducting physical examinations of the physically active prior to their participation in any activities. This preparticipation exam/screening helps to detect any pre-existing or potential problems the athlete may have which would exclude him/her from participation in a particular sport.

(b)**Developing training and conditioning programs** - Perhaps the most important aspect of injury prevention is making certain that the athlete is fit and thus able to handle the physiological demands placed on them during athletic competition. The athletic trainer works with the coaches to develop and implement an effective training and conditioning program for the athlete. An athletic trainer must be knowledgeable in the area of applied exercise physiology, particularly with regard to strength training, flexibility, improvement of cardiorespiratory fitness, and weight control.

(c)**Selecting protective equipment** - The athletic trainer works with coaches and equipment personnel to select protective equipment and be responsible for maintaining its condition and safety. Protective equipment also involves the application of protective taping, padding, bandaging, braces, and other devices in order to prevent injury or re-injury.

(d)**Creating a safe playing environment** - To the best of his or her ability the athletic trainer must create a safe environment for competition. This involves removing various items from the practice or playing area which

might pose a potential danger to the physically active. The athletic trainer should also be aware of the potential dangers associated with practicing or competing under inclement weather conditions, such as high heat and humidity, extreme cold, or electrical storms. The athletic trainer should have the authority to restrict, alter, or cancel practice if the environmental conditions prove to be hazardous to the health of the athlete.

II. RECOGNITION, EVALUATION AND IMMEDIATE CARE OF ATHLETIC INJURIES - Athletic trainers must possess a high level of proficiency in assessment skills to accurately recognize and evaluate the nature and severity of an athletic injury. Athletic trainers must be able to recognize and deal with conditions such as severe head or spine injuries, hemorrhaging, shock, or heat illness. They must be prepared to administer cardiopulmonary resuscitation (CPR), apply emergency splinting, or supervise the transportation of an injured athlete. The assessment and evaluation process involves various aspects:

(a)**Obtaining a history** - This involves finding out as much information as possible about the actual injury and the circumstances surrounding its occurrence. Information gained in a thorough history can provide important clues in determining which structures may be injured and which assessment techniques will be appropriate as the athletic trainer continues his/her evaluation.

(b)**Observation/inspection of the injury** - Refers to determining the presence and/or extent of deformity, discoloration, bleeding, effusion, and obvious pathological signs and symptoms through visual inspection of the injured area and by comparison with the contralateral uninjured body part.

(c)**Palpation of injury** - Refers to touching the injured area of the individual in order to determine the level of tenderness, effusion, deformity, crepitus, and other pathological signs and symptoms. Palpation of an injured area requires an appropriate knowledge of human anatomy in order to correctly identify which structures may be injured.

(d)**Range of motion assessment** - Refers to the determination of decreased range of motion and/or muscular weakness of the injured area through bilateral comparison of active, passive, and resistive movements. These procedures are used in an attempt to locate and define the structures involved in the injury, as well as to evaluate the integrity of affected tissues.

(e)**Stress testing of ligaments** - Refers to stressing the ligamentous structure of the athlete's injured joint in order to determine the presence and extent of joint laxity. This assessment procedure helps to identify which ligamentous structures are involved in an injury.

(f)**Neurological evaluations** - Refers to assessing the athlete's neurological, sensory, and motor functions through the administration of functional testing (i.e. reflex testing) in order to assess the extent of injury to structures of the central or peripheral nervous system.

⇒ **Athletic trainers must also be skilled in management and treatment procedures. These include:**

(a)**Administering immediate first aid** - The athletic trainer is responsible for administering appropriate first aid for the injured athlete, and for making correct decisions in the management of an acute injury. Athletic trainers should be certified in both cardiopulmonary resuscitation (CPR) and basic first aid procedures.

(b)**Application of protective techniques to support and protect an injured area** - This refers to the use of cervical collars, spine boards, splints, slings, and/or bandages and dressings on the injured athlete to facilitate the safe, proper management and/or transportation of an injured individual.

(c)**Providing therapy to promote healing and recovery** -

The athletic trainer is responsible for administering various treatment modalities (i.e. heat, cold, ultrasound, electrical muscle stimulation) to help promote and facilitate the healing process for an injured area. The athletic trainer should closely monitor the athlete's progress so that he/she can adjust or modify the athlete's treatment program based on the athlete's progress.

III. REHABILITATION AND RECONDITIONING OF ATHLETIC INJURIES

This involves the restoration of an injured area to normal form and function in the shortest possible time. Athletic trainers are responsible for designing and implementing programs to effectively rehabilitate an athlete in a minimal amount of time. Depending on the nature of the injury, rehabilitation requires a progressive, systematic program that develops range of motion, muscular strength and endurance, coordinated movements, functional activities, and cardiorespiratory endurance. Rehabilitation also includes total body conditioning occurring concurrently with restoration of the injured area so the athlete can meet the physical demands of athletic activities when returning to participation.

IV. HEALTH CARE ADMINISTRATION - Organization and administration of the athletic training program are often overlooked aspects of the athletic trainer's responsibilities. Athletic trainers must plan, organize, evaluate, and implement policies and procedures necessary to provide their athletes with the most effective health care. There are many duties and responsibilities involved in the organization and administration of an athletic training program. These include:

(a)**Ordering equipment and supplies** - The athletic trainer must keep on hand a wide range of supplies and equipment to enable him/her to handle whatever situation may arise. Therefore, the athletic trainer should keep a close tab on the various supplies in the training room and order them accordingly.

(b)**Budget allocation** - The athletic trainer is responsible for operating the athletic training program within his/her operating budget. The athletic trainer must make decisions on how available money should best be spent. Budget allocation may also involve the distribution and maintenance of work-study moneys for student-trainers.

(c)**Record Keeping** - The athletic trainer is responsible for keeping accurate and detailed records, including medical histories, preparticipation physicals, injury reports, treatment records, and rehabilitation programs. This is often a very time consuming aspect of the athletic trainer's duties.

(d)**Insurance** - The athletic trainer is often responsible for filing and managing insurance for injuries which were referred to other health care professionals. This involves filing the initial claims with both the school and individual's personal insurance, as well as coordinating these two forms of insurance to make sure that all medical bills are effectively paid.

(e)**Supervision/instruction of assistants** - The head athletic trainer is responsible for the supervision of all assistant trainers and student-athletic trainers. Supervision of these individuals refers to activities used to enhance the performance of departmental employees through appraisal of their effectiveness, evaluation of their conformance to departmental standards, and/or evaluation of the adherence to specific institutional policies.

(f)**Referral to appropriate health care providers** - Athletic trainers should have a good rapport and working relationship with other members of the sports medicine team, such as the team physician, orthopedist, dentist and ophthalmologist. Following an appropriate evaluation of an injury, the athletic trainer should determine if the injured individual needs to be referred to another health care provider for further evaluation or follow-up care.

V. **PROFESSIONAL DEVELOPMENT AND RESPONSIBILITY** - The athletic trainer is responsible for counseling and advising physically active individuals, not only with regard to rehabilitation and treatment of specific injuries, but on any matter that might be beneficial to the athlete. The athletic trainer needs to also have the ability to recognize situations that require consultation with other health care professionals regarding an athlete's social or personal problem. This involves skill in assessing an athlete's need for professional consultation and referral of the athlete to the appropriate professional.

The athletic trainer is responsible for providing a good learning environment for student-trainers. Athletic trainers need to have the skill and knowledge necessary to instruct students in the competencies required to become effective athletic trainers themselves.

Finally, as a health care professional, the athletic trainer is responsible for educating athletes, coaches and the general public about matters involved in the field of athletic training, as well as other health related matters. This can be accomplished through clinics, seminars or health fairs.

- **2). What aspects of the practice of the occupation constitute a potential harm to the public?**

There are several aspects involved in the practice of athletic training which have the potential to cause harm to the public. These aspects relate to (1) the settings in which athletic trainers are employed, (2) the age and/or maturity level of the athletes in certain settings, (3) the autonomy of the practice of athletic training and (4) the types of procedures performed by athletic trainers. We will look at each of these areas individually:

(1)**Settings in which Athletic Trainers are employed** - Athletic trainers are employed in a wide variety of settings, including high schools, colleges and universities, clinics and in the industrial setting. In each of these settings, the athletic trainer has certain duties and is responsible for providing care to a specific population. Each of these settings provide its own particular challenges and difficulties. This is especially true in the high school setting where the athletic trainer must make decisions regarding the health, safety and well-being of minors, and must often do so in loco parentis. If unqualified individuals are placed in a position to make these decisions, this constitutes potential harm for the individuals for which they are responsible.

(2)**Age/Maturity level of participants** - The fact that the high school athletic trainer makes decisions involving the care of minors is further complicated in that many of the athletes at this level have not yet reached maturity, either anatomically or physiologically. For example, bones in young individuals are in the process of growing and undergoing calcification. If one of the physically active should suffer an injury that involves the growth plate of one of the immature bones, and this injury is mishandled, then permanent deformity and joint dysfunction could occur.

(3)**Autonomy of practice** - Athletic trainers are often the only health care provider on site in the event of an injury or emergency situation. Because of this, athletic trainers must be competent to make decisions regarding care of acute injuries without direct supervision. If unqualified individuals are allowed to serve in this capacity, this can constitute potential harm.

(4)**Types of procedures performed** - In the course of treatment for various athletic injuries, assorted therapeutic modalities may be used. Athletic trainers are instructed in the proper use of these modalities. If these therapeutic modalities are used incorrectly, or are performed by an unqualified individual, there exists a potential for further harm to the injured individual. Other functions performed by the athletic trainer, if done so improperly, have the potential to lead to harm. For the functions typically performed by the athletic trainer, please refer to section 1(a) of this criteria.

- **3). What physical, emotional, mental, social or financial impairment would result from incompetent care, inappropriate care, or practitioner error?**

The potential for harm to the public does exist with the practice of athletic training. This harm can be physical, emotional, mental, social or financial.

(a)<u>Physical harm</u> - This can range from disfigurement and joint dysfunction to permanent paralysis and possibly death. For example, if a facial laceration is not properly cleaned and closed, this can result in scarring, and thus permanent disfigurement. Also, improper management of cervical spine or heat related injuries can result in permanent paralysis or even death.

(b)<u>Emotional, mental and/or social harm</u> - Although injuries are often a consequence of participation in athletics, few athletes would acknowledge that a serious injury could ever happen to them. Therefore, when an unexpected injury occurs, the impact is very sudden and severe, much like what one experiences during the loss of a loved one. After an injury, a injured person typically undergoes a sequence of predictable psychological reactions including: (1) denial, (2) anger, (3) bargaining, (4) depression and (5) acceptance. Also, athletes who are injured suffer a loss of a major aspect of their identity and a primary source of reward and reinforcement.

Athletes vary in terms of their perceptions of an injury, and this has profound implications for the manner in which they progress through the stages of the grief process. If not properly managed and guided through the grief process, emotional and irrational thinking may take over and the injured athlete may then become angry, frightened or depressed.

Finally, physically active individual's share a unique bond that can quickly disappear when they lose that aspect of their identity through an injury. The injured athlete can no longer interact athletically with his or her teammates, therefore the potential exists for them to isolate and alienate themselves from the rest of the team. Attitudes and behaviors that convey the notion that a player is no longer part of the organization contribute to players becoming isolated or alienated, which may lead to quitting or pushing too hard to return to competition prematurely.

(c)<u>Financial</u> - There are several ways that improper management of an injury may have a financial consequence on the athlete. First, an improperly managed injury may lead to joint dysfunction and inability to continue participation in his/her particular sport. This may cause that athlete to miss out on scholarship opportunities, thus placing an increased financial burden on the athlete.

Secondly, if the injured individual has the potential to become a professional athlete, a mismanaged injury may eliminate this opportunity, thus causing the athlete to be denied possible future income.

Finally, if an injury is mismanaged, this may lead to further physical complications which may require more extensive medical intervention, thus greatly increasing the cost of care for this injury.

(D). Has the public been harmed and how has this harm been documented?

When an injury occurs during an athletic activity, it frequently requires appropriate medical intervention and management. The persons and organizations in charge of athletic activities will have the duty to provide proper medical assistance to injured participants as soon as possible.

If the person in charge of the activity is not possessed of medical training and attempts to render medical assistance, these acts may be determined to be unnecessary or positively detrimental to the well-being of the injured participant. Several incidence of harm to the public have been documented. Abstracts of several legal cases involving the provision of inappropriate medical care to injured athletic participants are given below:

⇒ *Duda et al. v. Gaines et al. (1951)* - A high school football player brought suit against two football coaches for injuries he sustained to his shoulder during a tackling drill. The football player alleged negligence on the part of the coaches for failure to obtain proper medical assistance for his injuries.

⇒ *Hale v. Davies et al. (1952)* - A high school football player brought suit against the head football coach for injuries he suffered to his shoulder during football practice. He was originally injured on August 25, 1949, and sustained further injury to his shoulder on September 6, 1949. The court ruled that a 16 year old boy, who engages in practicing or playing football assumes or takes the risk of being injured while so engaged, and subsequently dismissed the case.

⇒ *Welch v. Densmuir Joint Union High School District (1958)* - A high school football player brought suit against the school district for injuries he suffered during a football scrimmage. During the scrimmage, the player suffered a cervical spine injury and was rendered a quadriplegic due to improper management of this injury.

⇒ *Mogabgad v. Orleans Parish School Board (1970)* - The parents of a high school football player brought a wrongful death suit against football coaches after said coaches actively denied the player access to treatment for two hours after he suffered symptoms of heat stroke and shock. The coaches were found guilty of negligence with respect to the students death.

⇒ *Montgomery v. City of Detroit (1989)* - The mother of a high school student brought a wrongful death suit against the physical education teacher after her son collapsed while running on the track and died of a heart attack. The plaintiff alleged negligence on the physical education teacher, based on the teacher's lack of knowledge of how to properly make an emergency call.

⇒ *Halper v. Vayo (1991)* - A high school wrestler brought suit against his coach for physical injuries that he sustained as a result of the coach's alleged negligence in connection with treatment of the wrestler's knee injury. The athlete alleged that his coach, who possessed no medical training, attempted to pull and manipulate the athlete's leg following a knee injury, then allowed him to return to competition against a more experienced collegiate wrestler.

- **4). To what can harm be attributed?**

The potential for harm can be attributed to several factors, including lack of knowledge, lack of skills, lack of ethics, and/or lack of supervision. If an individual attempts to intervene in an injury situation and does not possess the appropriate knowledge to do so, he/she may cause further or more severe harm to the injured individual. If an individual does not possess the knowledge of the proper use of therapeutic modalities, and improperly applies one of these modalities, this individual can cause further harm to the injured athlete. For example, if this individual were to apply heat rather than cold to an acute thigh contusion or strain, this would cause increased blood flow to the injured area, thus resulting in increased swelling.

Secondly, if an individual does not possess the appropriate skills to manage a particular injury, further harm can be caused. For example, if an individual who is unfamiliar with the proper procedures involved with appropriate management of a cervical spine injury attempts to place the injured athlete on a spine board without stabilizing the athlete's head, this can result in further trauma to the spinal cord, thus causing paralysis and/or death.

Unfortunately, there are some unscrupulous individuals who attempt the practice of athletic training. These individuals may attempt to pass themselves off as qualified or certified athletic trainers when in fact they have little or no knowledge or training in the field of athletic training. The unsuspecting public has no way of knowing whether or not these individuals are qualified to care for their injuries, and thus run the risk of harm if improperly cared for.

Finally, lack of supervision may lead to harm. Most athletic trainers, especially in the high school and collegiate settings, practice with minimal supervision, and usually do so under the direction of a physician. Many of the athletic training procedures require ongoing monitoring and close observation of the athlete to detect if the procedure is over-stressing the athlete or causing a negative response. If the person performing these treatment procedures has not been trained in observation of critical reactions in athletes, then pain, injury, over fatigue and further injury may occur.

- **5). Does a potential for fraud exist because of the inability of the public to make an informed choice in selecting a competent practitioner? Provide documentation of instances of fraud.**

The potential for fraud does exist due to the inability of the public to make an informed choice in selecting a competent practitioner. For athletic trainers practicing outside a clinical setting, few restrictions may be applied regarding their credentials, or lack thereof. There is also currently no mechanism in Virginia for consumers to investigate the credentials of persons who claim that they are athletic trainers. This, in itself, lends the possibility of fraud.

Also, since there is currently no regulations of athletic trainers in Virginia, there exists no mechanism to prevent individuals calling themselves athletic trainers from marketing there services at any given cost. Because of this, the consumer is unprotected from unscrupulous individuals. The public also has no means of recourse against fraudulent practices at the present time.

- **6). Does a potential for fraud exist in the reliance of third parties (insurers, etc.) on competent practitioners?**

Currently most athletic trainers are not receiving third party reimbursement for their services rendered. Although, some insurance companies are researching the possibility of athletic trainers providing health care services at a more reasonable cost then other health care professionals. If insurance companies allow athletic trainers to charge for their services, the Commenwealth of Virginia has no regulation of the athletic trainers and thus fraud would most definately exists. Several other states have adapted various forms of regulation for athletic trainers to prevent persons who are not athletic trainers from collecting money for athletic traing services. Licensure for athletic trainers would prevent non-licensed individuals from collecting money illegally.

- **7). Is the <u>public</u> seeking regulation or greater accountability of this professional group?**

Unfortunately, the general public does not often seek accountability of health professionals. When citizens are dealing with the trauma of acute injury and disability, they tend to trust in and rely on the most easily accessible health professionals. Because most of the public are not knowledgeable about athletic training services, they do not have a set of expectations regarding these services. Therefore, they often cannot recognize incompetent or inadequate treatment. Due to the trust that the public places in health professionals, especially during crisis, the Virginia Athletic Trainers Association feels that licensure is necessary for proper protection of the public.

Also, other health professionals, such as physical therapists and rehabilitation specialists perform many of the same functions as athletic trainers. Both of these professions have been regulated by the Commonwealth of Virginia. Therefore, since athletic trainers perform many of the same functions as these regulated professions, it is felt that the profession of athletic training should also be regulated.

CRITERION 2

The practice of the health occupation requires specialized education and training, and the public needs to have benefit by assurance of initial and continuing occupational competence.

- **8. What are the educational or training requirements for entry into this occupation?**

A) There are no educational or training requirements required by **the Commonwealth of Virginia** for entry into the profession of Athletic Training. Essentials have been established on a national level by the governing body of Certified Athletic Trainers, the National Athletic Trainers Association. The National Athletic Trainers Association Board of Certification, Inc. (NATABOC) was established in 1989 to provide a certification program for entry level athletic trainers and continuing education standards for Certified Athletic Trainers. Additionally the NATABOC has established the continuing education requirements that all certified athletic trainers must satisfy in order to maintain their status as a NATABOC Certified Athletic Trainer. In order to attain Certification as an Athletic Trainer, a candidate must satisfy: 1) the Basic Requirements; 2) the Section Requirements used to meet eligibility requirements; and 3) pass a three part national certification examination.

Part I. Basic Requirements

1. The athletic training student must have a high school diploma to begin accumulation directly supervised training hours that are to be used to meet requirements for the NATABOC certification;

2. Applicants for certification must submit proof of graduation (an official transcript) at the baccalaureate level from an accredited college or university located in the United States of America. Graduates of foreign universities may petition for a substitution of this degree requirement. Such a request will be evaluated at the candidate's expense by an independent consultant selected by the NATABOC.

3. Candidates must submit proof of current certification in First Aid and CPR from one of the following acceptable providers: American Red Cross, American Heart Association, National Safety Council and EMP America. Current EMT Certification is an acceptable alternative to satisfying the First Aid and CPR Requirements.

4. At the time of application, an applicant for certification must verify that at least 25 percent of the required athletic training practical experience hours were obtained in actual practice and/or game coverage with one or more of the following high risk sports: football, soccer, hockey, wrestling, basketball, gymnastics, lacrosse, volleyball, and/or rugby.

5. The Certification application must be endorsed by a NATABOC Certified Athletic Trainer.

Part II. Section Requirements

Section I. NATA Approved Curriculum Graduates

NATA curriculum candidates must successfully complete an NATA Approved Athletic Training Education Program, in no less than two years, that includes 800 hours of athletic training experience under the supervision of a NATABOC certified athletic trainer. The athletic training experiences obtained must be in Athletic Training settings associated with the approved curriculum. Applicants who are applying for NATABOC Certification as a curriculum candidates from an NATA Undergraduate Program must receive their bachelor's degree from that college or university.

Section II. Internship Candidates

At the time of application, each internship applicant must present documentation of at least 1500 hours of Athletic Training experience under the supervision of a NATABOC certified athletic trainer. These hours must be obtained in no less than two calendar years and not more then five years. Of these 1500 hours at least 1000 hours must be attained in a traditional athletic setting at the interscholastic, intercollegiate, or professional sports level. The additional 500 hours may be attained in an Allied Setting under the supervision of a NATABOC certified athletic trainer. The internship candidate must present an official transcript verifying successful completion of at least one formal course in each of the following areas: Health, Human Anatomy, Kinesiology/Biomechanics, Human Physiology, Physiology of Exercise, Basic Athletic Training, and Advanced Athletic Training. An acceptable alternative for advanced athletic training is one course each in Therapeutic Modalities and Rehabilitation Exercise.

B) Attach a sample curriculum (actual curriculums from Virginia institutions that teach athletic training follow.)

Sample Curriculums

A) The College of William and Mary: (Internship Program)

1. Physical Modalities:

Prerequisites:

Bio 308 Human Anatomy
Kin 308 Biomechanics of Human Movement

2. Rehabilitation Techniques

Prerequisites:

Bio 308 Human Anatomy
Kin 308 Biomechanics of Human Movement

3. Introduction of Athletic Training
4. Safety Measures, Emergency Care and Treatment

5. Organization and Administration of Physical Education

6. Issues in Health, or A Survey of Contemporary Topics in Health

7. Sport Psychology or Principles of Psychology

B) James Madison University (Undergraduate Curriculum Program)

Athletic Training Education Requirement:
(Hours = Credits earned per semester per class completion)

1. Human Physiology:	3 hours
2. Human Anatomy	4 hours
3. Emergency Health Care	3 hours
4. Prevention and Care of Athletic Injuries	3 hours
5. Sports Medicine	3 hours
6. Sports Medicine Lab (Upper Extremity)	3 hours

7. Sports Medicine Lab (Lower Extremity)	3 hours
8. Therapeutic Exercise (Upper Extremity)	3 hours
9. Therapeutic Exercise (Lower Extremity)	3 hours
10. Therapeutic Modalities	4 hours
11. Use and Effects of Drugs	3 hours
12. Practicum in Health Education	3 hours
13. Organization and Administration of Athletic Training	3 hours
14. Clinical Techniques-Health Education	3 hours
15. Physiology of Muscular Activity	3 hours
16. Biomechanical Principles of Kinesiology	3 hours
17. Elementary Statistics	3 hours
18. Nutrition for Wellness	3 hours
19. Developmental Psychology	3 hours

C) Old Dominion University (Graduate Approved Curriculum)
(Hours = Credits earned per semester per class completion)

1. Athletic Training Seminar I (Surgical Observation Rotation)	1 hour
2. Athletic Training Seminar II (Emergency Procedures)	2 hours
3. Advanced Exercise Physiology	3 hours
4. Therapeutic Modalities	3 hours
5. Physical Assessment of the Human Body	3 hours
6. Recognition and Reconditioning of Athletic Injuries to the Lower Body	3 hours
7. Practical Analysis of the Body for Athletic Trainers	3 hours
8. Contemporary Issues in Athletic Training	2 hours
9. Recognition and Reconditioning of Athletic Injuries to the Upper Body	3 hours
10. Research Methods	3 hours
11. Sports Medicine Radiology	1 hour
12. Athletic Training Seminar III (Sports Medicine Clinic Rotation)	1 hour

13. Kinesiology	3 hours
14. Recognition and Reconditioning of Athletic Injuries to the Head, Neck and Torso	3 hours
15. Sports Medicine Pharmacology	2 hours

D) University of Virginia (Graduate Approved Curriculum)

1. Anatomical Basis of Athletic Training (Cadaver Dissection)
2. Educational Statistics
3. Advanced Athletic Training
4. Advanced Exercise Physiology or Sports Nutrition
5. Mammalian Physiology
6. Thesis
7. Practicum in Athletic Training
8. Seminar in Athletic Training
9. Modalities in Athletic Training
10. Orthopaedic Basis of Athletic Training
11. Sports Medicine Conference (The Art and Science of Athletic Training)

C) There are three universities in the state of Virginia that offer NATA approved curriculum. James Madison has the only NATA approved undergraduate curriculum in the state of Virginia. The University of Virginia and Old Dominion University offer NATA graduate level approved curriculums. In addition the College of William and Mary, Virginia Commonwealth University, Lynchburg College, Emory and Henry College, Radford University, University of Richmond, Old Dominion University (Undergraduate), University of Virginia (Undergraduate), Averett College, Washington and Lee, and Longwood College offer the course work and practical supervision to qualify to take the National Athletic Trainers Association Certification Examination. It is also possible for someone to come from an out of state University or College and fulfill the practical experience hours in the state of Virginia under the supervision of a Certified Athletic Trainer in Virginia, and qualify for the examination.
Therefore, although only certain institutions have the full compliment of courses needed to obtain certification, each Certified Athletic Trainer is a potential supervisor for a student in Athletic Training.

- **9. Are these programs accredited? By Whom?**

Athletic Training programs at the baccalaureate and graduate levels are accredited by the Board of Certification of the National Athletic Trainers' Association, and the American Medical Association Commission on Accreditation of Allied Health Education Programs(CAAHEP). The United States Department of Education recognizes the CAAHEP, in cooperation with the Joint Review Committee for Educational Program in Athletic Training (JRC-AT), as the accrediting agency for entry level athletic training educational programs.

- **10. What are the minimum competencies (knowledge, skills, and abilities) required for entry into the profession?**

The National Athletic Trainers Association is the parent organization of Certified Athletic Trainers across the United States. A Certified Athletic Trainers' duties include prevention, recognition, evaluation, immediate treatment and rehabilitation of injuries. Entry level competencies for Athletic Trainers as identified by the National Athletic Trainers Association include the following categories: 1) prevention of athletic/activity related injuries/illnesses, 2) recognition, evaluation and immediate care of athletic or activity related injuries/illnesses and medical referral, 3) rehabilitation and reconditioning of active people, 4) Health care and administration, 5) Professional development and responsibility.

I. PREVENTION OF ACTIVITY RELATED INJURIES/ILLNESSES

Identifies injury/illness risk factors associated with participation in competitive athletics and plans and implements all components of a comprehensive athletic or activity related injury/illness program.

A. Cognitive Domain (Knowledge and Intellectual Skills):

Knowledge of:

a. Basic components of a comprehensive activity related or athletic injury/illness prevention program including 1) physical examinations and screening procedures, 2) physical conditioning, 3) fitting and maintenance of protective equipment, 4) application of taping, special pads, etc., 5) control of environmental risks.

b. Common risk factors and causes of activity related injuries in various sports, activities and work environments as identified by contemporary epidemiological studies and surveillance studies.

c. Intrinsic risk factors associated with normal physical and psychological growth and development patterns of the pre-adolescent, adolescent and adult male and female active person.

d. Risk factors associated with congenital or acquired postural abnormalities, physical disabilities and diseases (e.g. epilepsy, diabetes, asthma, congenital heart disease, absence of paired organs, visual impairments, etc..)

e. Environmental risk factors associated with climatic conditions, facilities and equipment, sanitation, playing rules, coaching methods and performance techniques.

f. Risk factors associated with biomechanical stress, extrinsic forces, physical demands inherent in the performance of motor skills common to various sports and activities.

g. Role of physical examinations and screening procedure in the identification of intrinsic injury/illness risk factors and potential disqualifying conditions.

h. Role of personal health habits in the prevention of injuries/illnesses including personal hygiene, diet and nutrition, weight control, rest, etc..

i. Basic components of in-season and off-season physical conditioning programs for development of cardiovascular-respiratory efficiency, flexibility and muscular strength, power and endurance specific to the needs of individual athletes and to the physical demands of specific activities.

j. Purposes and effects of contemporary isometric, isotonic and isokinetic strength training equipment.

k. Techniques and physiological effects of cardiovascular endurance training and weight training on musculoskeletal, nervous, cardiovascular and respiratory systems of the human body.

l. Effects of various type of flexibility programs and stretching exercises on normal contractile tissues of the human body.

m. Safety precautions, contraindications, and hazards associated with the use of various strength training equipment, conditioning methods, work hardening and exercise routines.

n. Principles of an effective heat illness prevention program including those pertaining to acclimatization and conditioning, fluid and electrolyte replacement, selection of clothing, monitoring of weight loss, and scheduling and organization of practice sessions.

o. Normal thermoregulatory mechanisms of the human body including methods of heat dissipation and the associated effects of exposure to high environmental heat and humidity and the use of various clothing materials.

p. Recommendations, guidelines and policy statements published by professional associations and agencies regarding work and athletically related participation during extreme weather conditions.

q. Principles of energy absorption and force dissipation as applied to the protective capabilities of commercial padding materials and various type and models of standard protective equipment.

r. National Operating Committee on Standards of Athletic Equipment standards for design, construction, maintenance, reconditioning and fitting of protective equipment for active people.

s. Legal concepts and considerations associated with the purchase, fitting, and maintenance of protective sports equipment including those pertaining to product liability, personal liability and shared responsibility.

t. Rules and regulations pertaining to the use of special protective equipment, braces, splints, etc. as established by governing athletic associations.

u. Contraindications and side effects of prescription and non-prescription medications.

B. Psychomotor Domain (Manipulation and Motor Skills)

a. Use of commercial fitness testing equipment, administration of standard physical fitness tests, and recording and interpretation of test results including isokinetic, isotonic and isometric strength testing devices.

b. Administration of static and dynamic postural evaluation and screening procedures including functional testing for muscle tightening.

c. Administration of anthropometric measurement techniques (skinfold measurement, underwater weighing, girth measurement, limb length measurement, height, weight, etc.)

d. Assessment of systolic and diastolic blood pressure through the use of a sphygmomanometer and stethoscope.

e. Determination of relative humidity through the use of appropriate instruments for the prevention of environmental stress.

f. Fitting of standard protective equipment and clothing consistent with the physical characteristics and needs of active individual and the demands of participation in specific sports and activities.

g. Application of appropriate preventative taping and wrapping, splints, braces and other special protective devices consistent with sound anatomical and biomechanical principles.

II. RECOGNITION, EVALUATION, AND IMMEDIATE CARE OF ACTIVITY RELATED INJURIES/ILLNESSES

Conducts a thorough initial clinical evaluation of injuries and illnesses commonly sustained by the competitive athlete or active person, and formulates an impression of the injury/illness for the primary purposes of 1) administering proper first aid and emergency care, and 2) making appropriate referrals to physicians for diagnosis and medical treatment.

A. Cognitive Domain (Knowledge and Intellectual Skills)

Knowledge of:

a. Normal anatomical structures of the human body including the musculoskeletal, nervous, cardiovascular, respiratory, digestive, urogenital and special sensory systems.

b. Normal physiological functions of the human body including those of the musculoskeletal, nervous, cardiovascular, respiratory, digestive, urogenital and special sensory systems.

c. Principles and concepts of body movement including functional classification of joints, joint biomechanics, typical ranges of joint motion, joint action terminology, muscular structures responsible for joint actions, skeletal muscle contraction and kinesthesis/proprioception.

d. Common injuries to each major body part as indicated by contemporary epidemiological studies of injuries in various competitive sports and activities.

e. Characteristic pathology of all common closed soft tissue injuries, open wounds, and fractures.

f. The human body's normal immediate and delayed physiological response to trauma.

g. Common etiologic factors contributing to injury including congenital and/or acquired structural and functional abnormalities, inherent anatomical and biomechanical characteristics, common injury mechanisms, and adverse environmental conditions.

h. Typical symptoms and common clinical signs associated with athletic injuries/illnesses including those associated with local tissue inflammation and systemic infection.

i. Commonly accepted techniques and procedures for clinical evaluation of injuries/illnesses including a) history, b) inspection, c)palpation, d) functional testing and special evaluation techniques.

j. Role and function of various medical and paramedical specialists and their respective areas of

expertise in the definitive treatment injuries/illnesses.

k. Recognition of psychological signs and symptoms of athletic injury and illness.

l. The role of prescription and non-prescription medication in the immediate care of athletic injury and illness.

m. Planning, documentation, and communication of appropriate rehabilitation strategies to the necessary parties.

B. Psychomotor Domain (Manipulative and Motor Skills)

a. Construction and phrasing of questions appropriate to obtaining a medical history of an injured/ill active person including a past history and a history of the present injury/illness.

b. Identification of observable clinical signs typically associated with common athletic injuries/illnesses including structural deformities, edema, discoloration, etc..

c. Location and palpation of key anatomical structures commonly involved in injury pathology including bony landmarks, ligamentous/capsular tissues, musculotendinous structures, abdominal region, etc..

d. Administration of active and passive range-of-motion tests for all major joints of the body including the use of goniometric measurements.

e. Use of manual muscle testing techniques including application of the principles of muscle/muscle groups isolation, segmental stabilization, resistance/pressure, grading, etc.

f. Administration of appropriate stress tests for ligamentous/capsular instability including application of the principles of joint positioning, segmental stabilization, pressure, etc..

g. Administration of appropriate sensory and motor neurological tests for intracranial injuries and injuries to the spinal cord, nerve roots, plexuses, and peripheral nerves.

h. Assessment of blood pressure through the use of a sphygmomanometer and stethoscope and evaluation of pulse rate, strength, and regularity.

i. Incorporation of appropriate examination techniques and procedures into an effective, systematic scheme of clinical evaluation.

III. Rehabilitation and Reconditioning

Plans and implements a comprehensive rehabilitation/ reconditioning program for injuries/illnesses sustained by the competitive athlete and/or active people.

Cognitive Domain (Knowledge and Intellectual Skills)

Knowledge of:

a. Basic components of a comprehensive rehabilitation program including determination of therapeutic goals and objectives, selection of therapeutic modalities and exercise, methods of evaluating and recording rehabilitation progress, and development of criteria for progression and return to competition or daily activities.

b. Physical/physiological parameters to evaluated as a basis for development of individualized rehabilitation programs (muscular strength/endurance, range-of-motion, etc.)

c. Contemporary measurement and functional testing equipment (isokinetic devices, goniometer, dynamometers, calipers, etc.)

d. Normal physiological responses of the human body to trauma, physiological process of wound healing and tissue repair, effects of trauma and inactivity on specific body tissues(ligaments/capsules, muscles, tendons, bones, etc.), and resulting implications for selection and use of therapeutic modalities and rehabilitation exercises.

e. Commonly used techniques of primary and reconstructive surgery, associated anatomical and/or bio-mechanical alterations, and resulting implications for selection and use of therapeutic modalities and rehabilitation exercises.

f. General physiological effects of inactivity and immobilization on the musculoskeletal, cardiovascular, nervous, and respiratory systems of the human body and resulting implications for rehabilitation and reconditioning.

g. Role and function of commonly used pharmacological agents in the medical treatment of common activity related injuries/illnesses.

h. Contemporary immobilization devices (casting materials, splints, etc.) and special protective equipment (braces, special pads, modified taping procedures, etc.)

i. Contemporary ambulating aids and ambulating techniques (crutch gaits, cane gaits, special ambulation techniques).

j. Prevailing pain control theories and associated rationale for the selection and use of physical agents and/or psychological techniques for the control of acute and chronic pain.

k. Systemic and local physiological effects of therapeutic heat and cold on normal and traumatized tissues of the human body.

l. Principles of electro-physics including basic concepts associated with the electromagnetic and acoustic spectra (frequency, wavelength, etc.) and electrical units (amperes, volts, watts, ohms, etc.)

m. Principles of electro-physics and biophysics, specific physiological effects, and therapeutic indication and contraindications associated with use of (a) electro-therapeutic modalities (shortwave diathermy, microwave diathermy, ultrasound, TENS, EMS. (b) hydrotherapeutic modalities (whirlpool, contrast bath, immersion baths, moist heat pads), cryotherapy, (d) radiant energy (luminous heat lamps, infrared radiators), (e) paraffin, (f) intermittent compression units, (g) cervical and lumbar traction units, (h) massage, and (i) other contemporary therapeutic modalities.

n. Specific physiological effects, therapeutic indications, and contraindications associated with the use of passive, active, active assisted, and resistive (isokinetic, isotonic, isometric) exercises.

o. Theory and principles associated with the use of special evaluation/therapeutic exercise techniques including (a) manual muscle testing, (b) proprioceptive neuromuscular facilitation (PNF), underwater/pool exercises, and (d) joint mobilization.

p. Typical psychological and emotional responses to trauma and forced physical inactivity as factors affecting the rehabilitation process (motivation, anxiety, apprehension, etc.)

q. Comparative effectiveness of taping and bandaging, special padding, and standard protective equipment as related to the safe return of injured athletes and active people to competition.

r. Environmental risk factors affecting the safe return of the injured persons to competition/daily activities including those associated with weather conditions, facilities and playing surfaces, inherent physical demands in particular sports, coaching methods, etc.

s. Nutritional demands placed on the injured athlete or active person.

t. Planning, documentation and communication of appropriate rehabilitation strategies to the necessary parties.

B. Psychomotor Domain (Manipulation and Motor Skills)

a. Use of manual muscle testing techniques including application of the principles of muscle/muscle group isolation, segmental stabilization, resistance/pressure, grading, etc.

b. Measurement and recording of muscular strength, endurance, and power through the use of contemporary isometric, isotonic, and isokinetic testing devices.

c. Measurement of range-of-motion for all major joints of the body through the use of a goniometer.

d. Anthropometric measurement including girth measurement, skinfold measurement, underwater weighing, limb length measurement, height, weight, etc.

e. Administration of static and dynamic postural evaluation and screening procedures including functional testing for muscle tightness.

f. Measurement and fitting of ambulation aids and instruction in the use of common crutch/cane gaits.

g. Clinical application of contemporary therapeutic modalities (see cognitive domain, #14) including patient preparation, set-up, determination of dosage, and operational procedures.

h. Application of passive, active, active assisted, and resistive exercise through the use of manual exercise and contemporary commercial exercise equipment.

i. Application of proprioceptive neuromuscular facilitation (PNF) techniques for development of muscular strength/endurance, muscle stretching, and improved range-of-motion.

j. Application of passive and resistive underwater/pool exercise for the improvement of joint range-of-motion, muscular strength, etc.

k. Application of special protective devices (braces, splints, special pads, etc.) and taping, bandaging, and wrapping procedures.

IV. Organization and Administration

Plans, coordinates and supervises all administrative component of an athletic training program for a high school, college, professional organization, club, or industrial setting including those pertaining to a) health care services (physical examinations and screening, first aid and emergency care, follow-up care and rehabilitation, etc.), b) financial management, c) training room/medical clinic management, d) personnel management, and e) public relations.

Cognitive Domain (Knowledge and Intellectual Skills)

Knowledge of:

a. Basic Concepts of legal liability as they apply to the Certified Athletic Trainer and his/her performance of job responsibilities (tort, negligence, standard of care).

b. Current guidelines and recommendations for conduction of physical examinations developed by governing athletic associations, medical groups, workman's compensation laws and professional organizations.

c. Basic components of a comprehensive plan for physical examination and screening of active people for work and competitive activities including a) medical history, b) the physical examination, and c) medical authorization for participation.

d. Typical organizational plans for conducting individual and group physical examinations, their comparative advantages and disadvantages, and the respective roles of various medical and paramedical personnel in each.

e. Basic components of an effective physical examination including commonly recommended health factors to be evaluated and potential disqualifying conditions.

f. Basic records and forms and filing systems pertinent to conduction of physical examinations.

g. Basic components of a comprehensive athletic injury/illness emergency care plan including those pertaining to a) personnel training, b) purchase, maintenance, and storage of supplies an equipment, c) identification of emergency care facilities, d) development of communication and transportation systems, e) assignment of personnel for emergency care coverage, and f)accident reporting and record keeping.

h. Basic records and form pertaining to the management of injuries including those used for a) securing emergency care information and parental consent, b) accident reporting, c) medical referral, d) documentation of treatment, e) recording of rehabilitation program, f) release of medical information.

i. Typical policies and procedures associated with health care insurance including those pertaining to common benefits and exclusions, preparation and submission of claims, and financial restitution.

j. Current injury/illness surveillance and reporting systems.

k. Principles of financial management related to the acquisition and maintenance of medical supplies including supply inventory and needs assessment, evaluation and selection of products, development and submission of budget requests and purchase orders, bidding procedures, etc..

l. Principles of medical clinic management and operation including those pertaining to assignment of personnel, scheduling and supervision of services, storage and use of supplies and equipment, and cleaning and maintenance.

m. Federal and/or state regulations pertaining to safety and sanitary standards for health care facilities and the installation and maintenance of therapeutic equipment.

n. Basic architectural considerations pertinent to the design of safe and efficient medical facilities and athletic training rooms.

o. Purposes and functions of exercise equipment, therapeutic modalities and other equipment and supplies essential to equipping an athletic training room or medical facility.

p. Principles of recruitment, selection and employment of team physicians and other medical personnel.

q. Proper maintenance and documentation of records for the administration of prescription and non-prescription medication.

V. Professional Development and Responsibility

Interprets the role of the certified athletic trainer as a health care provider, promotes athletic training as a professional discipline, and provides instruction in athletic training/sports medicine subject matter areas.

Cognitive Domain (Knowledge and Intellectual Skills)

Knowledge of:

a. History and development of athletic training and sports medicine in the United States.

b. History of the National Athletic Trainers Association including significant historical events and contributions of influential leaders.

c. Goals and objectives, professional activities, code of ethics, and organizational structure of the National Athletic Trainers Association.

d. Current activities pertaining to the professional preparation, credentialing (certification/licensure), and continuing education of athletic trainers in the United States.

e. Purposes, objectives, and professional activities of major medical/paramedical organizations and other professional sports medicine groups in the United States.

f. Contemporary issues and problems confronting athletic training/sports medicine and their affect on health care in the United States.

g. Comprehension of basic research design and statistical analysis and ability to interpret research in athletic training, sports medicine, and related areas.

h. Theoretical concepts, knowledge, and technical skills composing the subject matter of athletic training.

i. Basic principles of learning, motivation, and methods of classroom instruction including instructional techniques, use of audiovisual aids, test construction, evaluation and grading, etc.

j. Principles of organizing laboratory/clinical experiences and techniques of instruction in training room skills.

k. Principles of planning and organizing in-service workshops, seminars, and clinics in athletic training and sports medicine.

The Athletic Trainer is also expected to continue his/her own professional development by remaining current in evaluation technique and knowledge. The Athletic Trainer must have up-to-date knowledge of anatomical research and trends, exercise physiology, biomechanical research, nutritional research, pharmacological research, and physics as it relates to athletic training.

- **11. Are there State, regional, or national examinations available to assess entry level competence?**

A. Yes there is a national examination available through the National Athletic Trainers Association Board of Certification that assess entry level competence but this examination is not required by the state for an athletic trainer to practice in the state of Virginia.

B. Who develops and administers these examinations? The NATABOC has developed this national examination. Test questions for the certification examination are prepared by committees of the NATABOC certified athletic trainers. The test is administered in several sites around the United States at specific times of the year and is proctored and administered by Certified Athletic Trainers.

C. What areas of competence are tested? Written, written simulation, and oral /practical section questions are developed to assess the entry level candidate's knowledge on subject matter from the five domains of athletic training: 1) Prevention of Athletic Injuries, 2) Recognition, Evaluation and Immediate Care of Activity Injuries, 3) Rehabilitation and Reconditioning of Activity Related Injuries, 4) Health Care Administration, 5) Professional development and Responsibility.

D. How are the examinations validated? Each question is validated by three independent judges (certified athletic trainers) from the item writing committees, referenced to current resources from literature on or related to athletic training, and repeatedly edited by certified athletic trainers for clarity and content. Each question is also subject to editing for grammar and technical adequacy by experts from Columbia Assessment Services, the NATABOC's testing agency.

E. Outdated or retired examination: To protect the integrity of the examination, this request can not be filled.

- **12. Are there requirements and mechanisms for ensuring continuing competence?**

The NATABOC has established that all Certified Athletic Trainers, in order to maintain their certification, must attain a prorated number of continuing education units (CEU's) within a three year period. Certified Athletic Trainers must submit, during this three year period, proof of current certification in Cardiopulmonary Resuscitation. Failure to satisfy the NATABOC Continuing Education Unit requirement can result in suspension and/or revocation of certification.

- **13. Why does the public require assurance of initial and continuing competence?**

a) The skills described above demonstrate the complexity of the Athletic Training position. The complexity of the profession opens up the possibility for harm to the public from an untrained person acting in this capacity. In the industrial setting, an incompetent decision by an untrained person can cost the consumer thousands of dollars, the employee extended time away from the job, insurance company dollars invested in workman's compensation and unproductive time for many companies. In the school environment, Athletic Trainers often are responsible for minors. Incompetent decisions with young people can have detrimental life long effects. Athletic Trainers have the opportunity to work with modalities to improve function in persons with injuries. Modalities can include exercise, whirlpools, ultrasound, electrical muscle and nerve stimulation, heat and ice. Modalities used in the proper way are excellent adjuncts to therapeutic exercise in the course of injury treatment. Modalities used improperly can cause permanent injury or cause an injury to become worse. Again, with a minor, special circumstances regarding growth patterns of bones and maturity levels are essential knowledge of a qualified Athletic Trainer utilizing any form of modality.

The occupation of Athletic Trainer encompasses many areas and some do have similarities to other health care professions that are already regulated by the state. There are however no other fields that encompass all of the responsibilities of an Athletic Trainer's duties and there is no other form of education and training that would prepare an individual to meet **all** the demands of Athletic Training.

b) What assurances does the public already have (private credentialing or certification, institutional standards, etc.) of initial competence?

The certification process established by the NATABOC would assure the public of initial competence if it were mandatory for athletic trainers to be certified through the National Athletic Trainers Association. This however is not the case in the state of Virginia. Virginia citizens have no assurance of initial competency regarding athletic trainers.

c) Why are these assurances inadequate?

Although minimum competency in all of these areas is required and tested by the National Athletic Trainers Association, there are no laws in the state of Virginia prohibiting someone who can not fulfill these demands in a competent manner from acting in the capacity as an Athletic Trainer in any setting. Individuals who have certification by the National Athletic Trainers Association have met the minimum competencies, but such certification is completely voluntary. The Board of Certification for the National Athletic Trainers Association has no legal recourse for preventing an individual who has not met these minimum competencies from practicing Athletic Training. The Board has been established to monitor those individuals that become certified and to make sure these individuals stay current in their field through continuing education requirements and removing the certification of those individuals who do not continue to meet the requirements of the National Athletic Trainers Association. This means that even those individuals that have had their certifications revoked by the National Athletic Trainers Association could seek gainful employment in industrial settings, private clinics and with the youth of Virginia in the high school and University settings.

- **14. Are there recognized or emerging specialties (or levels, or classifications) within the occupational grouping?**

Currently there is only one level of certification as an athletic trainer.

CRITERIA III

The functions and responsibilities of the practitioner require independent judgement and the members of the occupational group practice autonomously.

- **15. Describe the nature of the judgments and decisions which the practitioner must make in his practice.**

a) Is the practitioner responsible for making a diagnosis?
An Athletic Trainer in not responsible for making a final diagnosis. However, Athletic Trainers are trained and often must evaluate acute injuries and make the initial decision on the course of action to be taken for acute injuries.

b) Does the practitioner design or approve a treatment plan?
Athletic Trainers do design and approve treatment plans on patients. Often the physicians instructions outline a very simple and basic plan for each patient merely listing the injury. The interpretation on what to do with each patient is often left to the discrepancy of the Athletic Trainer.

c) Does the practitioner direct or supervise patient care?
Athletic Trainers direct and supervise patient care after an initial directive by a physician.

d). Does the practitioner use dangerous equipment or substances in performing his/her functions?
An Athletic Trainer uses equipment and substances on a daily basis that could be dangerous to the patient if utilized improperly. Athletic Trainers are educated in and operate many electrical modalities on a regular basis. Ultrasound, electrical muscle stimulators and nerve stimulators are often a part of a patient's total treatment regimen. The following is a list of potential dangerous equipment that the Athletic Trainer has expertise in:

⇒ Whirlpools
⇒ Electrical Nerve Stimulators
⇒ Electrical Muscle Stimulators
⇒ Ultrasound
⇒ Hydrocullator Moist Hot Packs
⇒ Hydrocullator Reusable Cold Packs
⇒ Adhesive Tape/Bandages and Bracing
⇒ Exercise Protocols

1) Whirlpool: There are many inherent dangers in utilization of a whirlpool. Generally whirlpools are filled deep enough that threat of drowning is certainly a concern if the patient is immersed in the whirlpool. Immersion also places demands on the knowledge of temperature regulation. Whirlpools are generally set at therapeutic cold and hot temperatures. Knowledge of the proper temperature for the amount of body part exposed can be critical to the health of a patient and the care of the injury. It is also critical that the person administering treatment know that along with many indications for use, whirlpools both hot and cold have many contraindications. Contraindications for cold include circulatory disturbances, hypersensitivity to cold, prolonged application over superficial nerves, Raynauds Syndrome and frostbite. Contraindications for treatment with moist heat would include for example current hemorrhaging, swelling, vascular compromise, heat stress, and acute conditions.

The risk of electrical shock is a major concern. Athletic Trainers are trained to design wet areas in the training room as to avoid the possibility of shock.

2) Electrical Muscle/Nerve Stimulators: Transcutaneous Electrical Nerve Stimulators can be dangerous especially if the placement of the electrical pads is such that the placement causes physical damage. Pads placed over the carotid sinus for example can cause death or brain damage. Electrical currents should never be used on a patient that is pregnant. Although not life threatening, the wrong parameters set by the practitioner can lengthen or delay healing or can permanently impair a patient.

3) Ultrasound: Ultrasound is utilized as a deep heat modality. Ultrasound can be dangerous if used over current hemorrhaging, areas of vascular compromise, the genital area, the eyes and head, the epiphysis (growth plates), or areas of anesthesia. Improper application (no movement of sound head) can result in extensive bone damage and periosteal burn.

4) Hydrocullator Moist Hot/Reusable Cold Packs: The biggest danger in the utilization of these modalities is the incidence of burn by either too hot or too cold a pack. Moist hot packs have a genuine potential to burn if not applied appropriately. Since reusable ice packs obtain and hold temperatures above normal frozen water, the potential for frostbite is high if proper care and attention is not paid to protection of the skin.

5) Adhesive Tape/Bandages and Bracing; Improperly fitted bracing equipment or tape pulling the joint into an improper angle can cause a patient to injure themselves worse then prior to treatment. Knowledge of the proper biomechanics of joints is necessary when taping and bracing to allow for maximum protection of the brace.

6) Exercise Protocols: Many exercise protocols can cause patients to be debilitated if done improperly or instructed to do so improperly. Along with knee, should, elbow, wrist, hand, and hip injuries it must also be considered that the Athletic Trainer also works with the patient with spinal abnormalities and injuries.

- **16. What functions typically performed by this occupational group are unsupervised, that is, neither directly monitored nor routinely checked.**

a) What proportion of the practitioner's time is spent in unsupervised activity?
The degree of supervision of the Athletic Trainer largely depends on setting. In the high school, university and industrial settings, Athletic Trainers perform almost all of their duties unsupervised and they are not routinely checked. In private therapy clinics, the Athletic Trainer is under the supervision of a physical therapist.

b) Who is legally accountable/liable for acts performed with no supervision?
Depending on the setting there can be many people held liable for the actions of the Athletic Trainer. In private clinics, the Athletic Trainer, the Physical Therapist and the Physician writing the prescription could potentially be held liable for actions by the Athletic Trainer. In the schools systems, the individual, the school and the state of Virginia could all be held liable in situations of negligence or where torts exist.

- **17) What functions are performed only under supervision?**

a) Is the supervision "direct"(supervisor on premise and responsible) or "general" (supervisor responsible but not necessarily on premise)?
The Athletic Trainer is only under direct supervision in the clinical setting. In the clinical setting all actions are under the supervision of a physical therapist. In the clinical setting, most athletic trainers do not perform initial examinations but carry out much of the rest of the rehabilitative program for all patients. In the clinical setting supervision by a physical therapist occurs during the initial set up of rehabilitative protocol and intermittently after during the course of patient care. In the school setting, the Athletic Trainer is under the general supervision of each patient's physician. A team physician might have daily interaction and communication with the Athletic Trainer and at times the supervision would be direct as would be the case if the physician were assisting in the coverage of a game.

b) Who provides supervision?
Answered above in section a. of this section. How Frequently? Usually at least once per patient contact in the private clinical setting. Where? Usually direct supervision in the private clinic means the physical therapist is in the same building. For what purpose? The physical therapist is responsible for billing the patient and coding all appropriate charges. The physical therapist is also in charge of initial examinations and program design. The therapist must have daily contact with the patient in order to legally bill the patient for services.

c) Who is legally accountable/liable for acts performed under supervision?
First and foremost the Athletic Trainer is legally liable for services provided. Secondly, the clinic and the supervising physical therapist would be responsible for any services rendered by an Athletic Trainer under their supervision.

d) Is the supervisor a member of a regulated profession? In the private clinical setting the supervisor is usually a licensed physical therapist. In the school setting each patient's physician is technically a supervisor although supervision is general in this case versus direct.

e) Attach a protocol, if available that might govern a typical supervisory or collaborative arrangement?
No such protocol exists in the state of Virginia.

- **18. Does the practitioner of this occupation supervise others?**

a) Describe the nature of this supervision:

- Athletic Trainers supervise student athletic trainers at the college, university and high school levels. At the college, University and High School level Athletic Trainers commonly supervise Staff Assistant Athletic Trainers. Assistant Athletic Trainers generally fill the role of the Head Athletic Trainer when the Head Athletic Trainer is not present fulfilling all role delineation points as described in Criteria 2. In the private clinics it is not unusual to have athletic trainers supervising physical therapy aids on a regular basis. Occasionally the Athletic Trainer will be placed in the role of administration and might supervise physical therapists and the remaining staff members in a clinical setting.

- **19. Describe a typical work setting, including supervisory arrangements and interaction of the practitioner with other regulated or unregulated occupations and professions.**

There are several work settings that Athletic Trainers work in and each is distinctly different from the next.The typical settings for Athletic Trainers: 1) Professional, 2) College/University 3) High School, 4) Clinical, 5) Clinical/High School, 6) Clinical/Industrial.

1) Professional:
The Professional Level Athletic Trainer works specifically for one professional team of athletes. Generally, a professional level Athletic Trainer works under the supervision of a Team Physician that will have some direct supervision but mostly general supervision over the care of the athletes. There are usually at least a Head Athletic Trainer and an Assistant per professional team. The professional Athletic Trainer works out of a training room with a full compliment of rehabilitative equipment and modalities available for treatment. Generally, for all significant injuries the Team Physician examines and diagnosis the injury. The athlete is then sent to the Athletic Trainer for rehabilitation until the athlete is back to competition.

2) College/University:
The College/University Athletic Trainer is usually responsible for the care of all the College/University Athletic Teams and is often responsible for intramural sports and staff. The College/University Athletic Trainer can have both student athletic trainers and Assistant Athletic Trainers to supervise and is usually under the supervision of a Head Team Physician or a team of physicians. This supervision is sometimes direct and sometimes general depending on the injury, stage of rehabilitation and the frequency of physician visits to the training room. The College/University Athletic Trainer generally utilizes an athletic training room that resembles private therapy clinics with a full range of rehabilitative equipment and electrical modalities.

3) High School:
The High School Athletic Trainer is usually a certified teacher that teaches a full load of classes at the high school in a variety of areas and is the Head Athletic Trainer for all after school events. High School Athletic Trainers usually supervise student athletic trainers and sometimes Assistant Athletic Trainers. They work under the general supervision of a Team Physician or may work under the general supervision of any area physician depending on the athlete's primary care situation and insurance situation. Generally, significant injuries are sent to the primary care physician who directs care and the plan of rehabilitation.

4) Clinical:
Some Athletic Trainers work solely in the private clinic under the direct supervision of a physical therapist. Clinical Athletic Trainers are restricted by the physical therapy code and the physical therapist's interpretation of this code as to the duties they can perform and not perform. Athletic Trainers in the clinical setting are often limited to jobs similar to that of physical therapy aids. This limits the Athletic Trainer from performing initial examinations on patients, program design for patients, and program adjustment for patients. It often limits the Athletic Trainer from utilizing modalities as well.

5) Clinical/High School:
Clinical/High School Athletic Trainers usually work in a private physical therapy clinic part of the time and work in a high school or college setting the rest of the time. In the clinic the setting is similar to that described in the last paragraph describing clinical affiliations. Once the Athletic Trainer goes into the high school setting, the Athletic Trainer assumes the role of the Head Athletic Trainer at the school and the setting is described about in number 3 which describes the high school setting.

6) Clinical/Industrial:
Some Athletic Trainers work in a clinic part of the time and a private business the remaining time. In industry Athletic Trainers are utilized for initial screens of injuries, well programs, and work hardening programs. They can be utilized for in-house rehabilitation of injuries. Typically a Clinical/Industrial Athletic Trainer might not utilize an Athletic Training room outside the facilities provided by the physical therapy clinic.

- **20. Does this occupational group treat or serve a specific consumer/client/patient population?**

Athletic Trainers typically treat athletes of all ages and in a variety of sports especially at the University, College, High School and Professional levels. At the clinical and clinical/high school setting an Athletic Trainer can deliver treatment to both the athlete and non-athletic related orthopaedic injury. In the clinical setting patient population is wide based. In the clinical setting and high school setting a careful consideration that must be mentioned is that it is very possible that care being rendered can and often is delivered to a minor.

- **21. a) Are clients/consumers/patients referred to this occupational group for care or services? By whom? Describe a typical referral mechanism.**

Athletes are referred to Athletic Trainers for rehabilitation by physicians in all fields. A typical mechanism for referral would be as follows:

An athlete is injured playing football. The athletic trainer examines the injury and determines that a physician should be consulted. The athletic trainer send the athlete to the team physician. The team physician makes a final diagnosis of the athlete's condition and refers the athlete back to the athletic trainer for rehabilitative exercises and functional return to play.

b) Are clients/consumer/patients referred from this occupational group to others for care or services? To what practitioners are such referrals made? Describe a typical referral mechanism. How, and on what basis, decisions to refer made?

The Athletic Trainer performs an initial evaluation of the injury and determines if the athlete needs to be referred to a physician. The determination of whether or not a referral is necessary is based on the type and extent of injury. From there, the referral could be made to any one of many physicians depending on the type of injury, the athlete's insurance situation and the immediacy of the treatment needed. Athletic Trainers refer to physicians in all specialty areas, emergency medicine and family or general practice. On occasion, the Athletic Trainer could also need to refer athletes to other allied health professionals such as nutritionists and sport psychologists.

CRITERIA IV

The Scope of practice of an occupation is distinguishable from other licensed, certified, or registered occupations, in spite of possible overlapping of professional duties, methods of examination or instrumentation, or therapeutic modalities.

- **22) Which functions of this occupation are similar to those performed by other health occupational groups?**

⇒ **Which groups?**

Because the certified athletic trainer shares common goals with other health occupations, some overlap of functions and services may exist and is even necessary to achieve the ultimate goal for the physically active individual. The athletic trainer is the "hub" or center of the wheel which helps the physically active individual. Due to this central role of athletic trainers have in the health care microcosm, they must share common knowledge, expertise, functions, and goals with many health care occupations. Some of these occupations are: physical therapists, physicians, physicians assistants, nurses, emergency medical technicians, nutritionists, and sport psychologists.

Athletic trainers perform similar functions with physical therapists in a variety of areas. The most evident area is in the evaluation and treatment of musculoskeletal and neurological injuries that occur to the physically active. Developing plans of treatment, return to activity criteria, and extensive rehabilitation programs which help individuals return to activities of daily living and/or physical activity. Other similar functions are the use of electronic modalities such as ultrasound, electrical muscle stimulation, and TENS units, under the direction of a physician. Educationally , both professions have similar curriculums. Both have strong backgrounds in anatomy, rehabilitative exercise, and therapeutic modalities.

The largest group in the sports medicine wheel are the physicians, since they are ultimately responsible for all medical aspects of the athletes care and treatment. Yet, the athletic trainer must be able to evaluate and identify physiological, biomechanical, psychosocial, and pathological processes occurring in the physically active and properly refer these conditions to the correct physician specialist. the athletic trainer then must be able to communicate, understand, and perform the clinical applications of the physician's course of treatment. Together, the athletic trainer and physician work together in order to expedite the healing process of the individual and return them to competition and/or activities of daily living.

Physician Assistants (P.A.) are similar in function to nurses and physicians. Athletic trainers perform several similarities with physician assistants on a daily basis. Evaluation, treatment plans and procedures, and orthopedic screening tests are a few of the similar functions athletic trainers share with physician assistants.

Nurses perform many health screenings that monitor the health status of their patients. The athletic Trainer must also be able to monitor the health status of athletes and therefore must perform many of the same health screenings that nurses perform. Taking blood pressure and pulses, use the Snellen chart to check eye acuity, and be able to administer urine tests.

Athletic Trainers must be able to triage injuries and provide immediate emergency first aid and basic life support to the physically active. They must also be able to spine board an individual suspected of having a cervical spine injury. Being able to detect heat illnesses and treat active individual for conditions such as shock, diabetic hypo/hyper glycemia, and allergic reactions; are just a few common functions athletic trainers share with Emergency Medical Technicians (EMT's).

The physically active individual may be physically fit, physiologically well, psychosociallly adjusted, and biomechaically sound, yet their performance may not be nutritionally well balanced. Being able to assess and identify nutritional and diet deficiencies in the active individual and advise proper and optimal diets for them are similar functions shared with nutritionists. Often times athletic trainers have individuals with eating disorders such as anorexia nervosa and bulimia. They must be able to identify these conditions and seek guidance and medical attention for these individuals. Athletic trainers must also assist athletes in order to maintain proper nutrition, in sports where the diet is a primary concern such as: wrestling, gymnastics, swimming and ballet.

The athletic trainer and the sports physiologists share goals and functions in the athlete's emotional health. Athletic trainers serve as the first defenders and observers of emotional problems that may develop in an athlete. It may be emotional problems that already existed or coping skills for problems that arise from everyday life. Working with the emotional health of the injured individual is especially important as they progress through rehabilitation and possibilities of return to activity arise. If the athletes has injuries that would prevent return to his/her previous sport, the athletic trainer must work with or refer the athlete to counseling for coping skills and alternative activities Both the athletic trainer and sports psychologists must deal with these functions and problems.

⇒ **Are these other occupational groups regulated by the Commonwealth of Virginia?**

Most of these professions are regulated by the Commonwealth of Virginia. Physical therapists, physicians, nurses, physician assistants are all licensed health care professionals by the Health Regulatory Board in the Commonwealth. Emergency Medical Technicians are certified by their particular accrediting agency. Nutritionists and sports psychologists are not regulated by the commonwealth.

⇒ **Why should the applicant group be considered differently by the Commonwealth?**

Athletic Trainers should be considered differently since we have such a unique role in the sports medicine wheel. All of the components of the wheel are specialists in a finite field of expertise, in which they are trained and educated. Each Health Occupational group work together within the sports medicine wheel, yet each have their own inherent qualities which distinguish them from ordinary labor. Each health occupational group are important "spokes" within the wheel, but what distinguishes the athletic trainer is that we have the central role in dealing with the physically active. Therefore, we act as the "hub" which connects all the spokes to the wheel.

Since athletic trainers serve as the hub of the sports medicine wheel, they work with physically active before, during, and after injuries/illnesses occur. They must also work with many other health occupational groups to insure that the physically active receives timely, efficient, and proper medical care to prevent, treat, and rehabilitate any physical problem. Ultimately, the goal of the Certified Athletic Trainer is to return the physically active to activities of daily living and/or full athletic participation. This is something that NO OTHER GROUP MUST DO AS PART OF THEIR FUNCTION and that few institutions can afford to do in hiring one position for each part of the sports medicine wheel. Therefore, the existence and necessity of the athletic training profession is established and needs to be considered differently then any other health care profession.

23. Which of the functions are distinct from these other health occupational groups?

⇒ **Which groups?**

Athletic trainers have many distinguishing qualities from other health care occupations. Auspiciously enough, that is the case with every specialty in health care. If every particular group did the same thing our health care would be so limited in what it had to offer. Although

each health occupational group has distinct qualities the goal for every group is the same: to provide the best possible medical care to an individual.

Although we have many similar qualities to Licensed Physical Therapists, the Athletic Trainer have many distinguishing qualities which distinguishes itself. A physical therapists can only treat an individual "after the fact", since a physicians referral is needed for an evaluation. Athletic trainers work "after the fact" as well as "before the fact", with education and instruction, counseling and technique to aid in the prevention of injuries. Another inherent quality distinguishing ourselves from physical therapists is our role with "during the fact". We are educated in dealing with emergency care for acute trauma injuries. With strong backgrounds in first-aid, basic life support, triage, and spine boarding; the athletic trainer is often the lifesaving force during acute trauma injuries. Physical therapists have little background in this area since they deal with patients in a clinical setting due to their scope of practice. Physical therapists, however, do an excellent job within their scope of practice. Another difference with these two health care professions is that physical therapists have no requirement for continuing education. Athletic Trainers certified by the National Athletic Trainers Association, need 80 hours of continuing education every three years. Although, physical therapists are very competent and proficient within their scope of practice, their are many inherent qualities which distinguish athletic trainers. Together, athletic trainers and physical therapists make a excellent team within the sports medicine wheel.

Other health occupation whose functions are distinct from athletic trainers are physicians, nurses, and physician assistants. All these professions generally cover the same area within the sports medicine wheel. These groups fit into the category of "during the fact". They diagnose, treat, inject, prescribe medication and perform or assist in surgery. They often rely on other persons in the wheel to help complete the healing process. Seldom does these professionals work with the physically active individual before and after an injury. That is when they must rely on athletic trainers and/or physical therapists to complete the process.

Athletic trainers are also distinct from emergency medical technicians (EMT) in many ways. The EMT has extensive training in triage, advanced life support/first aid and many other emergency techniques. However, their scope of practice is isolated solely to these practices, while an athletic trainer has this training as well as the other areas which have been mentioned.

⇒ **Are these other occupational groups regulated by the Commonwealth?**

Refer to question 22b

⇒ **Why should the applicant group be considered differently by the state?**

Refer to question 22c

- **24. How will the regulation of this occupational group affect the scope of practice, employability, marketability, and economic and social status of these other groups?**

The regulation of athletic trainers will not affect the scope of practice and other occupational groups due to:

1) The uniqueness of the central role played by athletic trainers in the sports medicine wheel.
2) The unique functions performed solely by this profession.
3) The networking ability of athletic trainers to refer the physically active person to the proper health care professional.
4) Athletic trainers are not trying to compete with anyone. We are dedicated to provide the best possible health care for the physically active individual. Their are areas which we can be of great value in this endeavor.

Virginia certified athletic trainers are seeking protection of our scope of practice through state licensure. We have several inherent qualities which distinguish us from ordinary labor. Currently, anyone can call themselves an "athletic trainer" in the Commonwealth of Virginia. This has the potential to endanger the health, safety or welfare of the citizens within the commonwealth, if regulation does not occur. The public is simply not currently protected by any other means. Thus, due to our specialized skill and training, the public would benefit from having certified athletic trainers licensed in the Commonwealth of Virginia.

CRITERION VI

There is no adequate alternatives to State regulation of the occupation which adequately protect the public.

- **30. What laws or regulations currently exist to govern:**

⇒ **Devices and substances used in practice**

⇒ **Standards of practice and**

⇒ **Facilities in which practitioners practice or are employed?**

There are presently no state or federal laws defining, regulating, or enforcing the quality of athletic training services in the Commonwealth of Virginia.

Currently the Commonwealth of Virginia does regulate the practice of physical therapy and rehabilitation providers. The practice of physical therapy means "upon medical referral and direction, the evaluation, testing, treatment, reeducation and rehabilitation by physical, mechanical or electrical measures and procedures of individuals who, because of trauma, disease or birth defect, present physical and emotional disorders". The regulation defines a rehabilitation provider as "a person, functioning within the scope of his practice, performs, coordinates, manages or arranges for rehabilitation services". The definition of rehabilitation services includes "evaluation, assessment and other related services provided to a person with a disability for the purpose of restoring the person's productive capacity".

However, an athletic trainer does, on a daily basis in a variety of settings, upon medical referral and direction, evaluate, test, treat, reeducated and rehabilitate the physically active individual by physical, mechanical or electrical measures and procedures who, because of trauma present physical and emotional disorders. An athletic trainer utilizes a wide range of rehabilitation services to restore the physically active individual to a productive capacity for a variety of tasks.

- **31. Does the institution or organization where the practitioners practice set an enforce standards of care? How?**

Most secondary schools, colleges/universities, professional teams, and sports medicine clinics require specific qualifications of the athletic trainers, consistent with those established by the National Athletic Trainers Association. Many states have assumed the responsibility of assuring that the practice of athletic training is regulated throughout the various settings. Since the first athletic training bill was passed in 1973 by the Texas Legislature, 35 states have enacted laws to regulate athletic training. In states such as Virginia, gaps currently exist in defining and

enforcing the quality of athletic training services because there is no uniform quality standards throughout the state and throughout the various settings in which athletic trainers work.

- **32. Does the occupational group participate in a nongovernmental credentialing program, either through a national agency or a professional association? How are standards set and enforced in this program?**

Athletic trainers are certified by the National Athletic Trainers Association Board of Certification as described in the answer to Criterion 2. These requirements for certification have been adopted by the Virginia Athletic Trainers Association as the standards for trainer registration in the commonwealth through the Medical Society of Virginia. Certification by the National Athletic Trainers Association and Virginia Athletic Trainer Association registration is completely voluntary.

The National Athletic Trainers Association does have a Standards and Ethics Committee which has a procedure for receiving and investigating complaints. However, because of anti-trust considerations and the fact that many non-certified trainers are operating independently, the committee is restricted in enforcing standards. Private organizations such as the National Athletic Trainers Association and the Virginia Athletic Trainers Association cannot enforce public protection standards as easily as a state agency because a state agency is exempt from anti-trust law under the State Action Doctrine.

Also, as mentioned previously, membership in both the national and state trainer association is voluntary and a number of athletic trainers in Virginia are not affiliated with either of the organizations.

The National Athletic Trainers Association Board of Certification is in the process of establishing procedures for the removal of certification from trainers involved in unethical practice. The removal of certification would not be legally binding and this individual would be free to locate their practice in states such as Virginia where no legal regulation exists.

- **33. Describe any peer group evaluation mechanisms that exist in Virginia or in the nation.**

There are presently no peer group evaluation mechanisms defining, regulating, or enforcing the quality of athletic training services in the Commonwealth of Virginia.

The National Athletic Trainers Association (NATA), requires all certified trainers to submit evidence of continuing educational and professional development in order to maintain that level of professional status. To maintain Certification the minimum number of units to be accumulated every three (3) years Continuing Education period shall be 8 CEUs. The

Continuing Education Unit (CEU) is defined as "ten contact hours of participation in a organized Continuing Education experience under responsible sponsorship, capable direction, and qualified instruction" (10 contact hours-1 CEU). See Appendix 1 for the Continuing Education Requirements for Certified Athletic Trainer.

- **34. Describe activities or practices that would suggest that a practitioner is incompetent, impaired, or engaged in behavior that should be sanctioned. How should such behavior be sanctioned?**

There are many aspects of athletic injury prevention, recognition, evaluation, and care where the athletic trainers could be negligent or incompetent. Examples of this incompetence of negligence are listed below.

A. Negligence in the proper identification of the patient/athletes condition may result in the following:

1. Inadequate knowledge of the patient's pre-existing medical conditions resulting from the failure to read and understand medical charts/records and to properly communicate with the team physician or other medical staff.
2. Failure to perform correct or complete injury evaluations (on-the-field) because of lack of knowledge about the patient and about appropriate injury recognition and evaluation.

B. Negligence in performing appropriate and complete treatment may result in the following:

1. Inadequate or misinterpreted evaluations.
2. Inappropriate care/rehabilitation planning resulting from lack of knowledge about the patient condition and about methods of treatment.
3. Lack of communication with other members of the sports medicine team including physician, coach, therapists, etc.
4. Improper application and construction of preventive/protective strapping, bracing, and padding.
5. Failure to perform re-evaluations and therefore, failure to change of modify treatment/rehabilitation program when necessary.
6. Inadequate follow-up services and allowing injured athletes to return to activity before full recovery. Resulting in reinjury or further injury.
7. Failure to record the patient's progress and response to treatment.
8. Negligence in following correct medical and sports safety

Any practitioner found to be incompetent, impaired, or engaging in behavior that should be sanctioned should be placed on probation with a requirement of direct supervision by another

athletic trainer or not be permitted to engage in the practice of athletic training within the Commonwealth of Virginia, depending on the severity of the behavior.

- **35. Are there specific legal offenses which, upon conviction, preclude(or should preclude) a practitioner from practice?**

Currently there is no mechanism in Virginia which would preclude an athletic trainer from practicing athletic training if he were convicted of a legal offense.

- **36. If standards are set and enforced by existing organizations, explain the enforcement mechanisms and typical sanctions that are imposed upon proof of misconduct? Are these sanctions effective in protecting the public? If not, why not?**

Currently there is no mechanism in Virginia which would preclude an athletic trainer from practicing athletic training if he were convicted of a legal offense. Standards set by the National Athletic Trainers Association and adopted by the Virginia Athletic Trainers Association cannot be enforced. To insure greater protection for the public consumer, the National Athletic Trainers Association has throughout the past twenty years supported the nationwide movement towards state regulation.

- **37. Does a code of Ethics exist for this profession? Who established the Code, and how is it enforced? Is adherence mandatory or voluntary? Please attach a copy of any existing Code of Ethics.**

The National Athletic Trainers Association has adopted a codified standard of behavior. Since its inception of 1957, this code of ethics has been revised almost yearly. Its primary goal is to establish the highest possible standards of conduct for athletic training at all athletic program levels. The basic premise of this code is that the athletic trainer will act at all times with honesty, integrity, and loyalty. Members of the NATA who behave in a manner that is unethical or unbecoming to the profession can be censured or placed on probation or can lose their membership. These principles are intended for use by the NATA as a guide to appropriate conduct of its members. The principles are not designed or intended to define a standard of care for patients or practice. See Appendix 2 for the National Athletic Trainers Associate Code of Ethics.

Enforcement procedures have been established through a Ethics Committee. However, disciplinary actions are limited to censure, suspension, revocation of certification, or expulsion from the Association. The athletic trainer who has been charged of misconduct may continue to practice in states such as Virginia where certification or regulation is not required by state law.

- **38. Does any means exist within the occupational group to protect consumers from negligence or incompetence? How are challenges to a practitioner's competency handled?**

Currently there is no mechanism in Virginia to protect consumers from negligence or incompetence by an athletic trainer. The purpose of the Athletic Trainer Code of Ethics is to set guidelines for the appropriate conduct of members of the National Athletic Trainers Association. They are not written to protect the public and no legal recourse is possible when a charge of unethical conduct is made. When the trainer's certification is removed, practice remains possible in states without governmental regulation of athletic trainers such as Virginia.

- **39. What is the level of form of regulation sought? Why is it appropriate to regulate this occupational group through state credentialing (vs. private credentialing)? What is the justification for the level of regulation sought?**

Currently, the National Athletic Trainers Association has a certification process that insures entry level competency of athletic training personnel that choose to meet the educational and NATA requirements for certification. Since credentialing by the NATA is voluntary, there is no current effective means of enforcement if an individual does not choose to be certified in states where there is no state regulation of athletic trainers.

Currently there are individuals work in the capacity of an athletic trainer with little formal training or no educational preparation. Without state regulation no action can be taken. This is known to occur in some athletic departments that label a designated person "Trainer." Athletes, parents, and staff assume that these individuals have completed certain standards and thus unknowing entrust these individuals with the health care of the team members. Yet the quality of care does not meet the standards of athletic training practice. The emphasis of care is generally not independence of function and therefore the patient/injured athlete is not realizing the benefits of proper athletic training. Many of the sports injuries incurred by these young athletes, gone unrecognized, untreated, or mistreated, may return in later years in the form of chronic pain or permanent disability. In some clinical settings, an athletic trainer may be functioning in the same capacity as a physical therapist and/or physical therapy assistant.

In consideration of the levels of state regulation that best match the problems identified in this proposal, the following statements may be made:

Registration does not adequately protect the public from fraudulent charges and incompetent athletic trainer practice by a non-qualified individual. Registration does not adequately protect the public from fraudulent charges and incompetent athletic trainer practice by a non-qualified individual. Registration does not ensure that persons who state that they are providing athletic

training services are trained and certified in the profession. Registration would not prevent athletic programs from using non-qualified persons as "athletic trainers".

Statutory Certification is not an appropriate mode of regulation of the athletic training profession because it will only limit unqualified individuals from using the title athletic trainer and not insure the competence of the practitioner.

Licensure is the most appropriate and restrictive form of state regulation. Scope of practice is defined and limited to those with certain credentials who have met standards of minimal competency. Licensure is believed to be most appropriate form of regulation due to the evolving nature of practice in sports medicine and rehabilitation services and the various setting within which the practice of athletic training occurs. Athletic trainers generally perform their duties under the direction, but independent of a physician and their roles within a particular setting may vary according to the needs of the consumers. Because of the issues in scope and practice have become complex, it would seem appropriate for state government to regulate athletic training scope of practice since tasks of that practice are currently regulated (i.e. physical therapy, nursing, and rehabilitation providers).

The public will have legal recourse against unethical and incompetent practice. The injured athlete will have the option to take action against a person who might have caused harm or through incompetent, unscrupulous, or unauthorized treatment. The regulatory body will be empowered to investigate all complaints related to possible unprofessional conduct which provides a process by which a person committing malpractice can be disciplined or removed from practice.

The consumer will be guaranteed that all practitioners have set at least entry level requirements. In many cases the public has the ability to evaluate the merits of the service; however, individuals in need of athletic training services are frequently unable to make the necessary judgement. Furthermore, the specific techniques and methods used by athletic trainers may not be understood by the public and the scope of practice encompasses a broad range from preventive measures through emergency and acute care to the restoration of the physically active individual to a productive capacity for a variety of tasks.

- **40. What is the justification for the level of regulation sought?**

Currently the Commonwealth of Virginia does regulate the practice of physical therapy and rehabilitation providers. Athletic trainer are currently functioning, on a daily basis in a variety of settings, utilizing a wide range of rehabilitation skills and services to restore the physically active individual to a productive capacity for a variety of tasks. They evaluate, test, treat, reeducated and rehabilitate the physically active individual by physical, mechanical or electrical measures and procedures who, because of trauma present physical and emotional disorders. They currently perform these tasks upon medical referral and direction, but independently of a physician or physical therapist. However, the public has no assurances of the quality of care they receive or protection from incompetent behavior due to the lack of regulation.

ORAL PUBLIC COMMENT

September 14, 1998
Regulatory Research Committee Meeting

Douglas Cutter, M.D., Medical Director of Chippenham Sports Medicine. He is a primary care sports medicine physician, who is board certified in family medicine, with certification in sports medicine. Dr. Cutter reported knowledge of incidences of uncertified trainers causing harm. He covers athletic events with and without athletic trainers. He contends that nationally certified athletic trainers constitute an extension of sports medicine physicians. He stated that they have the tools, training, and knowledge to identify and assess injuries and route them to the proper referral.

Dr. Cutter reported four specific incidences of harm from athletic trainers who were not nationally certified:

(1) On May 5, 1998 a soccer goalie was taken to the emergency room. The child had a loss of consciousness from a head injury. The emergency room physician allowed him to go back to play as soon as the following day. On May 15, the child was injured again with a loss of consciousness. He needed an evaluation from a plastic surgeon due to face injury. His cat scan was negative; however, the he had, indeed, incurred serious injury. Dr. Cutter referred to it as "second impact syndrome." The child should not have been allowed to go back into the game following the first injury. Dr. Cutter contends that a certified athletic trainer would not have allowed him to have gone back. The child now suffers from fairly dramatic neuropsychiatric changes and will not be able to go to college as anticipated.

(2) On September 11, 1998 a minor was hit and knocked unconscious at a high school football game. An uncertified AT used smelling salts to rouse him. According to Dr. Cutter, this was completely inappropriate for someone with a head or neck injury who is unconscious. A sudden jerk to avoid the noxious stimulant could have done permanent damage.

(3) No specific date, but Dr. Cutter noted that a case of severe cellulitis was misdiagnosed by a uncertified athletic trainer to be a sprain and was taped. Cellulitis involves a great deal of infection. Had this treatment continued, the young athlete could have gone into septicemia, and potentially died.

(4) No specified date, but Dr. Cutter cited a case of a young man with an eye injury involving asymmetrical pupils. The uncertified athletic trainer was allowing the athlete to simply sit on the sidelines. Someone took the young man to a local hospital where he received emergency surgery to save his sight.

He expressed his serious concern over the mistaken parental belief that all athletic trainers know what they are doing. He noted that many team "Docs" are largely trained on the job. He pointed out that nationally certified trainers are well educated and trained, with a national certification examination and requirements for continuing education.

In response to inquiry from a Committee member, Dr. Cutter explained that no athletic trainer or other health care provider is required by Virginia law to be at high school athletic events.

In response to an inquiry from a Committee member, Dr. Cutter explained that the second impact injury could have been avoided if a nationally certified athletic trainer had been involved because the symptoms of neurological injury would have been readily recognized.

Steve Coles, Certified Athletic Trainer at the College of William & Mary. He was present to read the attached letter from Dr. Vito Perelli, a Pediatrician with Pediatric Associates of Charlottesville.

Steve Howell, Certified Athletic Trainer and Licensed Physical Therapist. He reported that he has worked in high school, collegiate, and in a physical therapy setting as an athletic trainer. He cites a number of issues which concern him. A minimal standard of care needs to be ensured. He reports that they are experts in athletic injury triage. He cited particular concern as to how the public may be mislead into believing a standard of care exists even among athletic trainers who have not become nationally certified. He expressed concern particularly about acute care issues. He noted how important it is for whomever is responsible for athletic care to be aware of heat exhaustion symptoms and to make sure athletes are properly hydrated.

Bill Caldwell, recently retired Tucker High School Principal. He had been a principal there for over 32 years. He stated that schools needed to have a better way to ensure that the athletic training personnel they select are adequate. He reported that in the past he, along with a team of others, was charged with developing a job description for athletic trainer for use by Henrico County schools. He had no idea of where to begin. He noted that teachers, psychologists, social workers, principals, bus driver are licensed/certified. Food service and custodial personnel are not. He stated that he did not want to add to bureaucracy but believed a "security blanket" was needed for the schools to ensure student safety.

Based upon his experience, he observed that the coaches' primary focus was the game and not the injured athlete. Typically, the coach would ask the injured athlete if he felt well enough to re-enter the game with no further validation of the athlete's health status. Mr. Caldwell indicated that he was thankful for now having athletic trainers whose role it is to safeguard the health of the athlete in such situations. He noted that now in Henrico County appropriate evaluation and care is given to the injured athlete regardless of the game's status.

Roger Webb, Insurance Manager for Fairfax County Public Schools. He stated that his role was general risk manager, parent, and grandparent. He reported that Fairfax currently requires NATA certification for all athletic trainers and will soon do so for assistant athletic trainers. He noted that he had been asked if a school could hire an assistant athletic trainer who would not be able to meet NATA certification requirements within the year, and he would not allow that school to take the risk. The insurer for Fairfax will not cover them if the school personnel do not follow the school system's rules.

He reported that Fairfax has required NATA certification for over a decade and they have never had a lawsuit because of athletic trainer malpractice or negligence. He stated that because athletic trainers are not required by school systems, those who do not already have them should not be burdened by regulating athletic trainers. He suggested that it would simply help those school systems that do have them have the ability to hire safer staff.

He indicated that Fairfax had been collecting injury rate information and that in the future a better analysis of safety measure impacts could be obtained; however, they know that their injury rates now are lower than the national average. Given the limited time frame of data they have available, an attempt an analysis of the impact that using nationally certified athletic trainers may have is not statistically sound at this time. He noted that NATA now provides software to schools to help them track injury data better and that, if used by the school systems across the country, will allow for consistent measurement on injuries and surrounding factors.

In response to a question from Board Counsel about whether athletic trainers engage in medical diagnosis, Mr. Webb explained that athletic trainers are available at every game and that they are making some assessment of attendant injuries based on their training. The athletic trainers and the school system do not view this assessment as "diagnosis," however. He further reported that parents sign permission slips for their child's participation but that such permission does not sign away the right to sue for future negligence should a "misassessment" occur.

In response to a question from a Committee member about whether athletic trainers in Fairfax work closely with school nurses, Mr. Webb indicated that the lack of availability of nurses at high schools and the timing of athletic events tends to preclude such involvement by the school system's nurses.

Tom Horn, Attorney, Director of Athletics for Falls Church Public Schools, Head Football Coach. He reported that in his experience it was necessary to clearly define the roles that only nationally certified athletic trainers should take. He noted that he has seen many individuals call themselves "trainers" based on their experience with athletics, alone. He expressed his view that parents and students expect a certain level of competency from school employees who are in the athletic trainer role. He posited that to place someone in that role who does not have the full qualifications required by national certification would betray the trust parents and students have in the system.

He cited an example of having a "trainer" who was not nationally certified ice and tape what he thought was a bad sprain. He also sent the student athlete back to the game. The athlete continued training and playing for three weeks with the injury site continuing to be swollen. The athlete and his parents continued to think that it was just a severe sprain. Finally, the parents took the child to see a physician and it was confirmed that the "sprain" was a fracture and that it had begun to grow back improperly. The child had to endure surgery to correct the problem and missed the majority of the next season.

He noted that the various communities in the state need some statutory standard to use to select qualified athletic trainers.

He noted that even a nationally certified athletic trainer should provide treatment only under the supervision of a physician – the physician should guide treatment while the athletic trainer administers it. The athletic trainer should only be allowed to operate without physician oversight in emergency situations.

In response to questions from Board Counsel, Mr. Horn reported that physicians are only available for football games, not training sessions. The physician, if present, determines whether an injured player should return to the game.

In response to Committee members' questions about assuring continuing competency, Mr. Horn noted that nationally certified athletic trainers must meet NATA content based continuing education requirements to maintain certification.

Brent Arnold, Assistant Professor of Athletic Training and a member of the Sports Medicine Program of the University of Virginia. He indicated that he is commenting as an educator. He reported that many of the skills taught to athletic training students in his program are the same as those taught to an orthopedic student, to the physical therapy student, and the occupational therapy student. He noted that regardless of whether athletic trainers are regulated by the state, educational programs will still teach these skills to athletic trainer students. He reported that NATA certification is voluntary and imposes no limitation on practice by those not certified.

He then explained that school systems in Virginia generally support the decision of an athletic trainer to not allow an injured student back into a game, even if a physician would allow it.

In response to questions about who is legally authorized to offer national certification, he responded that only NATA could. He noted that a separate national group exists in California, the American Athletic Trainer Association, but that they were taken to court and could no longer hold themselves out as being able to certify candidates.

He was also asked what the impact would be on schools offering athletic training program which were not accredited by NATA. He reported that NATA's requirements are that by 2004 no one will be able to sit for the NATABOC certifying examination without graduating from a NATA accredited program. He reported that NATABOC is a separate entity from NATA; however, it is in charge of the certifying examination and conducts the role delineation study for the profession.

Ken Tilley, Executive Director of the Virginia High School League (VHSL). He noted that the VHSL's primary objective is the safety of the student participants. The league has representatives from 288 member public high schools. There is no representation of private schools. Over 100,000 student athletes with 10-15 teams practice at the same time. He indicated that is would not be practical for athletic trainers to be at all training or even all games. However, he does voice the need for protocols to be adopted by member schools for dealing with injuries and accidents. Nonetheless, he does request that the Board consider some form of state certification or licensure. He noted that the commenters today came from insurance, administration, athletic training, physical therapy, and medical backgrounds and all voiced the need for state oversight of athletic trainers.

David Pawlowski, Certified Athletic Trainer and Representative from the Virginia Athletic Trainers Association. Mr. Pawlowski reiterated that it is the responsibility of the athletic trainer to determine when an athlete should come off the playing field. He posed the question to the Committee, is it what I do or what I call myself that poses the potential threat of harm to the public?

Kathy Graziano, Representative for the Virginia Athletic Trainers Association. In response to the general question of why nobody sues, she notes that some life altering injuries are never reported or officially documented in any way. She reported that an clerk in a shopping center she visited told her that she had had a sports scholarship for college. She was a runner, but because the coach kept icing an injury instead of sending her for proper treatment, she was permanently injured so that she could no longer engage in competitive running. Without this ability, her scholarship was rescinded, and she could not afford to go college on her own. She never reported it to anyone in authority, she never attempted to sue, but she was damaged permanently, nonetheless.

September 15, 1998
Full Board Meeting

Only one speaker presented public comment at this meeting.

Jon Almquist, Athletic Trainer, Fairfax County and Representative from the Virginia Athletic Trainers Association. He stated that nationally certified athletic trainers are highly qualified. He informed the Board that they have Bachelor of Science degree from a four-year accredited university program and subsequent training under the direct supervision of a certified athletic trainer. Their work domains include prevention of athletic injuries, evaluation and treatment of injuries of the physically active (abrasions to spinal cord injuries), rehabilitation and reconditioning, healthcare administration, and education and counseling. He reported that he concurs with the recommendations of the Regulatory Research Committee.

Pediatric Associates of Charlottesville, LTD.

MAIN OFFICE
Jefferson Medical Building
1011 East Jefferson Street
Charlottesville, VA 22902
(804) 296-9161
Business Office (804) 295-6193

Lori W. Balaban, MD, FAAP
Sheila F. Davis, MD, FAAP
Michael D. Dickens, MD, FAAP
Raymond F. Ford, MD, FAAP
Teresa Hashisaki, MD, FAAP
Vito A. Perriello, MD, FAAP
Paul Wisman, MD, FAAP

Lisa McRae, RN, PNP

ADOLESCENT AND YOUNG ADULT HEALTH CENTER
C.H. Gleason Suite
1011 East Jefferson Street
Charlottesville, VA 22902
(804) 971-9611

Elizabeth K. Williams, MD, FAAP

WEST SATELLITE
2411 Ivy Road
Charlottesville, VA 22903
(804) 296-8300

David L. Hawkes, MD, FAAP
Elizabeth K. Williams, MD, FAAP

NORTH SATELLITE
1522 Insurance Lane, A
Charlottesville, VA 22911
(804) 974-9600

David N. Reynolds, MD, FAAP
Raymond F. Ford, MD, FAAP

September 9, 1998

To Whom It May Concern:

Re: Licensure and/or regulatory control for Certified Athletic Trainers

I am sorry that an out of town commitment will prevent me from appearing in person to discuss this important issue. Over the last several years, as an individual and as a member of several committees, I am aware of tremendous support within the sports medicine community for the concept of regulation of certified athletic trainers.

I understand the reluctance to add unnecessarily to the long list of disciplines already being regulated in some manner. However, I feel that the situation with certified athletic trainers deserves special consideration. Many studies have shown that the presence of certified athletic trainers as first responders on the sideline of practice and games for interscholastic athletics has made a difference in reducing sequelae to injuries. In addition, studies have shown that the incidence of re-injury in youngsters was significantly lower at institutions that had resident certified athletic trainers compared to those without.

The need for regulation comes because there has been a tremendous growth in interest in fitness and conditioning. Every corner health spa has a "trainer" providing various services to individuals of all ages and shape. The expertise of many of these "trainers" is a far cry from the many years of training and education required to be a certified athletic trainer. The public's lack of awareness of the difference is a potentially serious problem.

As a pediatrician I am particularly concerned about unqualified "trainers" providing services to youngsters, especially youngsters who have not yet reached puberty. The advice, supplements, and exercise programs utilized in many health and fitness centers are frequently inappropriate for youngsters. My experience with certified athletic trainers is that they are aware of these differences and their response on the sideline of youth sports games or in rehabilitation is age appropriate.

I hope you will give strong consideration to their appeal for regulation. Below I have listed the committees on which I am serving that have over the last few years voted support for licensure or some appropriate regulation of certified athletic trainers.
Virginia High School League, Chairman Medical Advisory Committee
Medical Society of Virginia, Sports Medicine Committee
Virginia Chapter of American Academy of Pediatrics, Chairman Sports Medicine Committee

Sincerely,

Vito A. Perriello, Jr. M.D.