exception more players have become dental health conscious, and as a result many players have had dentistry done for the first time.

THE TEAM PHYSICIAN'S ROLE

In many ways the team physician is in the best position to understand the contribution of a team dentist and to bring the school administration to this realization.

The team dentist relieves the physician of oral health decisions, both in policy and emergencies, that would otherwise in effect be forced upon him.

THE SCHOOL'S ROLE

(Guided or directed by the school system administration in larger communities)

1. It selects a dentist who is a logical choice for team dentist (dental consultant). Such a dentist would usually have manifested interest in the athletics of that school, have a direct tie with the school by relationship to players, teachers, or community, or be considered because of a geographical location of home, office or practice.

2. The school and dentist both, out of courtesy, should discuss this proposed arrangement with other local dentists as a group or society, before the participation of the dentist begins.

3. The final selection would be the school's. Having conferred with responsible representatives of the dentists or dental society, it would be rare indeed for the other dentists to disagree with the school's choice.

4. The school and dentists would spell out in detail the responsiblity of the team dentist and his relation to other dentists in the community. There is no suggestion or implication that his/her position entitles or requires him/her to do the routine dentistry for the team as such.

5. A mutually agreeable financial arrangement must be clearly defined. (Usually nominal fees, if any, are involved).

THE DENTAL SOCIETY (or the dentist in a smaller community).

If the school does not know that a dentist or a society is willing to be of assistance it is perfectly proper for either to let the school know.

The approach must be very carefully handled however, to avoid the interpretation of publicity seeking, or a practice building motive.

When more than one dentist is considered, or interested, the final decision must be agreeable to the school. Occasionally more than one dentist may share or alternate the responsibilities (as physicians also do). But the dental society must not attempt to dictate the decision. Actually this is usually no problem, as the school or school system officials would meet with those of the dental society and a mutually agreeable arrangement would be arrived at. If there is a token fee involved, it might be part of such a discussion. (Some team physicians and team dentists return such a fee to the athletic equipment fund or to indigent care funds, or children's health week, etc.) In some areas the schools or school system has welcomed, or requested a letter from the dental society, outlining the suggested points for the school to consider, regarding dental health, injuries, and fees beyond insurance coverage, (school or parents).

TEAM DENTIST RESPONSIBILITY

There are three general areas of responsibility.

1. The primary concern is to have the players in good mouth health to start the season--which really means the beginning of practice. The team dentist together with school officials decides how this might best be accomplished, taking into consideration all of the factors involved with that particular school. Among the steps which may be taken are to ask the players to have an examination by their family dentist. (This should assure the most complete examination and treatment). Some schools are already requiring such an exam, as they do the physical examination.

If players fail to have this examination or do not have a family dentist, the next best approach is a "mouth mirror and explorer" examination by team dentists at the time the mouth protector program begins. This kind of simple examination will reveal problems obvious to a dentist, such as teeth which should be extracted and those with large cavities. Both of these conditions are very likely to cause toothache and probable loss of playing time during the season, as well as being a health hazard to the player. Most soft tissue infection or irritation would also be noted. In each of these instances mouth protectors should not be constructed before the condition is corrected. Problem malformation (such as cleft palate and others) will also be revealed. Special construction of the protector must be decided upon.

The team dentist will make the player and the school aware of such conditions and the player will surely be referred to his family dentist. If he has no family dentist the school will decide how the problem should best be handled.

Many schools already will not permit players with such serious conditions, to participate in athletic events until corrected. They do this because of their concern of player's welfare and the possibility of criticism should be regrettable eventualities result from letting an athlete compete in less than the best of health. Some leagues also prohibit using players in questionable physical condition.

Players wearing orthodontic appliances are a special problem. They are referred to their orthodontist for his/her action or advice as to how the mouth protector would best be provided.

2. Arranging for dental emergency treatment is also a responsibility of the team dentist. Generally, the policy is to call the player's family dentist. If he/she has none or the dentist not available, the team dentist will do the emergency work needed, or have an arrangement to have needed services available as soon as possible.

As in the case of the team physician, it is not necessary for the dentist to be at the practices, but should let the school know where he may be reached, if necessary.

3. Mouth Protector Program. The team dentist should make every effort to keep up on mouthguard developments.

The dentist relation to the mouth protector program may vary greatly in detail according to the local situation, which in turn affects the type of protector chosen. The value and need of dentists and their willingness to participate with the mouth formed types must be emphasized. Many people have thought that dentists would only be involved with custom made protectors. This is not true.

Mouth formed types can be better placed and formed by dentists. This results in greater comfort for players, which many studies have proven to be the greatest concern to the players.

SUMMARY

It is quite obvious that the team physician and team dentist position are almost completely analogous, in their respective professional areas.

The seriousness (and lasting effect) of some dental injuries have been too much overlooked, and therefore also, the value of dental consultation. The question is not the percentage of dental mouth injuries, versus other physical injury. The concern is the seriousness of some dental injuries and the fact that they can be almost eliminated by professional guidance.

Having a team dentist will surely become policy when schools fully appreciate how much it is in their interest and that of the player's health. Unfortunately, there are schools where dentists, as well as physicians are not available for this position.

It must be emphasized also that the team dentists, where the arrangements are properly handled, facilitates the health program, saves time and money and relieves the school of responsibility. Contrary experience on any of these points has simply been the result of mishandling by some of those involved.

The maximum in health for the players results from physicians' and dentists cooperating efforts. Many schools already realize this and have appropriate programs. Other schools fortunate enough to have professional assistance available have an obligation to players and parents to follow suit.

HIGH SCHOOL CUSTOM FITTED MOUTHGUARD PROGRAM

Dr. Donald Peterson

A. Organization of Program
   1. Those organizing the program must be convinced that a custom fitted mouth-guard is the best available.
   2. The organizers should be informed regarding the different types of mouth-guards available.
   3. Realizing what is available the dentists can better inform the public why a custom fitted guard affords the best protection.
      Types of guards
      Stock
      Mouth formed-chemical or heat
      Custom fitted
   4. Cooperation of the local dental society will help to carry out the program.
      A. To establish an ongoing committee to recruit volunteers
      B. Chairperson should rotate every 3 years or so.
   5. Meet with parent teachers group or booster club to convince parents that a custom fitted guard will best protect their children.
   6. Cooperation of the coaches will be needed.
   7. The Program should be considered a community service not one oriented for financial returns.

B. Implementation of the Program

   1. Contact high school coaches or athletic directors in early spring (April-May) to set a date for construction of mouthguards. Many schools have a pre-season camp or conditioning period in late summer before fall practice. This is a good time to take impressions because the athletes are all together as a group.
      a. School officials should take care of any transportation that might be needed.
      b. Advise the coaches that a minimal fee will be charged (approx. $3.00) to cover materials. This should be paid for at the time impressions are taken.
      c. School officials are requested to give an estimate of the number of athletes involved.
   2. Recruit Volunteers from the local dental society. Our society does not meet in June, July or August so volunteers are signed up at the last meeting in May.
      a. The number of sessions needed and the number of volunteers will depend on the size of various teams.
      b. We prefer to divide our sessions into half days. 9 to 12 and 1 to 4., as volunteers are easier to recruit for half-day sessions.

   Recruiting volunteers
   1. Do not pass a paper around but hand carry it to personally influence the reluctant volunteers.
   2. Have the dentist sign up for a specific time and be sure to obtain his office telephone number.
   3. The day following the sign-up have a secretary call the dentist's office to be sure the date is put in the appointment book.
   4. We also call again two weeks prior to the date of impressions to confirm the date.
   5. There will always be some late cancellations or no shows so recruit a few extra. We usually have 6 to 8 dentists and 4 or 5 assistants to handle 150 to 200 athletes.
   3. Facility for taking impression
      a. Should have running water and sinks
      b. Chairs
      c. Wastebasket
      d. Working spaces
      e. If you have a large group, a waiting area is helpful and this should be adequately supervised.
      f. Training rooms and chemistry labs are two good facilities or a large dental office if available.
      g. Try not to clog traps in sinks!!
   4. Equipment
      a. Trays
         use plastic disposable trays (tra-tens) sizes #1, 2 and 3
         Coe or similar perforated metal trays-these trays will produce best impressions Coe-#4, and x1
      b. Alginate (Jeltrate-fast set)
      c. Rubber bowls-spatulas
      d. Stone and vibrator

   Identification:
   Label trays with a string attached tab.

Write name and school on tab. Use pencil for this procedure.

Take Impression:
Need adequate labial and buccal coverage
Not necessary to cover the palate
If impression is short in labial repair by adding fresh alginate to void and reseat retracting lip to avoid trapping air.
For the usual athlete the impression is of the maxillary arch only.
For the athlete with prognathic jaw relationship, an impression is taken of the mandibular arch only.

Pouring of Impression and Trimming Stone Model:
Vibrate to eliminate bubbles.
Models are carefully trimmed after stone has initially set.
If models break repour impression.
Models should be free of defects and voids; should be filled with stone and excess stone bubbles should be removed.

Fabricating Guards:
Sheets of polyvinyl-acetate material are used to make the mouth guards. A stock vacuum or similar electric type heating unit is used to suck the material over the model. The thickness of the guard can be adjusted by adding additional thicknesses to bite on the inside of the guard, or by varying the length of heating of the polyvinyl sheets. The machines will be necessary if you are fabricating any large number of guards. When cool, the mouth guard can be removed from the model and trimmed with scissors. The borders should be trimmed so as not to infringe upon moving tissues in the labial and buccal vestibule and trimmed about 6-8 millimeters in length on the palate. The mandibular mouth guard is trimmed so as not to infringe on moving tissues also both buccal and lingual. The edge can be nicely finished using a soft chamois wheel and buffing the edge of the guard. No polishing agent is needed.

Special Cases:
For athletes with orthodontic wires the model should be blocked with stone before the mouth guard is made. For the athlete with erupting teeth, block the area with wet paper before the mouth guard is suctioned down on the model.

Labeling:
The athletes name can be marked on the buccal flange of the mouth guard with a laundry marking pencil. An alternate method of identification can be made as follows: Type the athletes name on a small piece of paper. With a heatless stone place a groove in the buccal flange on the mouth guard.
Make the groove deep enough so that when you place the paper in the groove it is completely submerged.
Cover the paper with extra plastic and heat and seal.

Occlusion:
If desirable, the occlusion can be equalized by the following method: usually when the mouth guard is placed in the mouth the occlusion is heavy in the posterior. Lightly heat the occlusal surface of the mouth guard with Hanau or similar torch. Cool on model in bowl of water or under tap.

MOUTH GUARD INFORMATION SHEET

Mouth guards are among the most important and successful protective devices used in sports today. Serious injuries to the mouth and face have been virtually eliminated in football by the mandatory use of face masks and mouth guards.

A little known but extremely important function of mouthguards is protection against serious head injuries. A properly fitting mouth guard separates not only the upper and lower teeth but also helps prevent the lower jaw from striking the base of the skull causing a concussion.

Custom mouth guards afford several advantages over commercially available stock mouth guards. A well-fitting mouth guard stays in place, is comfortable and does not interfere with breathing. It is constructed to cover exactly what is necessary where a stock mouth guard may be too large or too small.

We have several recommendations in regard to mouth guards:

1. Mouth guards may be self-adjusted within reason, if we cannot be reached. DO NOT cut off the portion of the guard covering the back teeth.
2. A small plastic margarine container with a lid makes an excellent container for storage. Mouthwash (changed regularly) is a good idea.
3. You need to be familiar with your equipment. We advise wearing guards in conditioning programs to become accustomed to them. Most injuries occur in practice; therefore, a guard is a must. There is a

penalty for not wearing a mouth guard in a game.

4. We do not recommend the mouth guards with straps since it encourages removing them too often. Also, it is very easy for referees to see when one is not in place.

5. A properly fitted mouth guard can be put in before practice and worn comfortably until after. Breathing, speaking and even drinking should be little problem with the guard in place.

We highly recommend mouth protection for ALL contact sports, including basketball, wrestling, soccer, etc.

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SUING ATHLETIC TRAINERS: A Review of the Case Law Involving Athletic Trainers

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Athletic trainers function in an environment where injuries and accidents occur frequently and where there is growing exposure to litigation. The increasing number of active athletes, growing awareness of the risks of injury and willingness to resort to legal remedies under tort law enhance the need for competent athletic trainers to assist in the prevention and handling of injuries and to reduce the exposure of sports programs to suit. An athletic trainer is one who practices "the art and science of prevention and management of injuries at all levels of athletic activity" (7). The athletic trainer by such practice shares in responsibility for the safety and well-being of the athlete.

Damage judgments which arise from sports have usually been based on: (a) permitting injured or unfit persons to play; (b) failing to provide safe facilities or equipment; (c) failing to employ competent coaches or personnel; (d) failing to provide competent training, instruction or supervision; and (e) negligently moving an injured player (3). In fulfilling their multiple roles as defined by the National Athletic Trainers Association, Inc., athletic trainers perform a valuable function in preventing injury, providing proper medical care and therefore decreasing the risks of litigation.

Despite the importance of the athletic trainer in managing risk and decreasing exposure to suit, the legal liabilities of athletic trainers in the environments in which they function are not always well defined or thoroughly understood (2). Although there is substantial literature on sports law with a specific focus on liability for injuries incurred (1,8), there is no research to identify and to characterize the position of the athletic trainer in litigation arising from sports injuries.

METHODOLOGY

The purposes of this research were to identify and describe the case law from 1960 to July 1989 mentioning athletic trainers in any context in the decision. The Westlaw and Lexis computerized legal research services permit identification of cases through a key work access system. These data bases contain all decisions in the state and federal court reporting systems.

The case law was analyzed to describe the parties to the litigation, the date, the court system in which the case was litigated, the position of the athletic trainer in the case, the institutional setting in which the case arose, the sport involved, and the legal issue in dispute. Finally, some assessment of the role of the athletic trainer in litigation and the legal issues arising from practice situations was developed from the data as well as from the courts' reasoning in each decision.

The search identified thirteen cases which referred to athletic trainers in the text of the decision as participating in the litigation. In addition, there were four cases in which the court referred to athletic training only by example. In total, only seventeen cases refer in any way to athletic trainer in the text of the published state and federal law reporters for the study period. Whether the athletic trainer was certified was not information ascertainable through this research methodology. The facts described in each case did not systematically characterize the certification status of the athletic trainer. Certification was not an issue in any of the cases.

This study relied on reported court decisions as the only practical form of data available. Reported case decisions are the only body of law serving as precedent to guide future judicial decision-making. In

contrast to reported cases, the actual number of cases involving athletic trainers cannot be determined given the present state of judicial information systems. As a result, the numbers of cases filed, dismissed, settled out of court, or the numbers decided but unreported are not recorded in any systematic way by the 50 states and remain beyond the scope of this study. Finally, although federal trial court decisions are usually reported, state trial court decisions are not. Thus, state court reporter systems include only appellate level decisions. These factors may explain, in part, the small number of cases found by this search. The case law described in this survey represents only the tip of the litigation iceberg. However, the reported cases do form the core of legal precedent and reasoning applicable to athletic trainers.

RESULTS

Description of Cases

Table 1 categorizes data from the thirteen cases identified in this study. No cases involving athletic trainers occurred prior to 1973. Eight of the thirteen cases have been decided since 1980.

The cases in this study came from nine states. Of these, four cases arose in Texas and two in Louisiana. These were. the only two states to require licensure for athletic trainers at the time the litigated incident occurred. In none of the cases, however, did the issue of licensure arise.

State courts decided 12 of the 13 cases. Of these twelve, the state supreme, or highest level, court decided five. The one case litigated in a federal court rose to the circuit or appellate level. Despite this, the issue before the court involved a question of interpretation of Mississippi state law since the federal courts became involved only because of diversity jurisdiction. Thus, in reality all cases litigated issues of state law.

The litigation included all levels of sports. There were three cases at the secondary school level, seven at public universities or colleges, one at a private university and two at the professional sports level. Perhaps due to the high incidence of injury, 8 of the 13 cases involved football. Three cases arose from basketball injuries. One case involved baseball injuries and one, lacrosse.

TABLE 1. Litigation involving athletic trainers

Case	Date	State and Court	Institution	Sport	Position
Zoller	1973	LA - state	postsecondary	football	instr. defendant*
Lowe	1976	TX - state	postsecondary	football	institutional
Speed	1976	IA - state	postsecondary	basketball	other
Lowery	1977	TX - state	postsecondary	basketball	named
Garza	1979	TX - state	postsecondary	football	named
O'Brien	1980	IL - state	high school	football	named
Sielicki	1980	FL - state	professional	baseball	other
Rawlings	1981	TX - state	postsecondary	football	witness
Gillespie	1983	UT - state	postsecondary	basketball	institutional
Berthelot	1984	LA - state	high school	football	witness
Hansen	1986	OH - state	postsecondary	lacrosse	institutional
Krueger	1987	CA - state	professional	football	named
Sorey	1988	MS -federal	postsecondary	football	named

*abbreviation used. Institutional defendant.

Position of the Athletic Trainer in Litigation

An athletic trainer was a defendant in nine of the cases, a witness to the facts in dispute in one, and was involved in the events leading to the injury in two other cases. The athletic trainer was never a plaintiff although an athletic trainer's testimony was on behalf of the plaintiff in one case. An athletic trainer was a named defendant in 5 of the 9 cases. In the other four cases the athletic trainer because of his/her employment was a part in suits where the institution was the named defendant. The athletic trainer was joined as co-defendant with a physician in four cases, a coach in four cases, and a school district in one case.

In two cases the athletic trainer served as a witness. In one of these the athletic trainer testified for the plaintiff and in the other, for the defendant. In testifying for the plaintiff the athletic trainer served as an expert witness to help establish whether a football helmet was defective (Rawlings). In testifying for the defendant a trainer contradicted the testimony of a plaintiff that a knee injury was incurred in football practice rather than in an auto accident (Berthelot).

In two cases the athletic trainer was not clearly a party or a witness but nonetheless the trainer's acts played some role in the litigation. In one case the athletic trainer made an initial referral of a problem to a physician who was later charged with negligence (Speed). In the other, a workmen's compensation case, the athletic trainer reported an injury to the management of a professional baseball club. The athlete was released and filed suit (Sielicki).

Legal Issues Addressed by the Courts

Issues of negligence dominate the cases involving athletic trainers. Eleven of the 13 cases in this study alleged underlying questions about negligence. The other two cases involved issues of fraudulent concealment and of workman's compensation.

Negligence is a question of state law. It deals with the existence, or lack thereof, of legally cognizable duties or responsibilities to others as well as with the scope of such duties. The failure to use reasonable care in carrying out one's duties to another is the basic standard of judgment in negligence. An actual injury or damage must have been sustained as a direct result of the defendant's acts in order for a negligence action to be sustained by a court. A plaintiff may allege several acts of negligence in one case.

In 4 of 11 cases involving a charge of negligence, the court addressed the issue of defining whether or not the defendant owed a duty to the plaintiff. In six cases the issue of breach of duty, that is, whether a defendant's actions abrogated actual responsibilities to the plaintiff, was the focus of litigation. Finally, the question of whether the defendant's acts caused the injury to the plaintiffs was at issue in three cases. No case failed on insufficient evidence of injury.

The predominance of negligence as the underlying cause of action is not unexpected, given the literature on litigation and sports (1,8). The negligence alleged in these cases included: recognition of an injury or illness, both as immediate first-aid and as long term treatment; failure to provide a proper injury prevention program; failure to provide emergency care; failure to provide qualified medical personnel; failure to refer to the proper physician; failure to provide supervision and instruction; failure to furnish proper equipment and protective devices; and, failure to provide medical information to the patient (player). Only one case dealt with the transportation of an athlete and in that case the court determined that the delay in care was not a factor.

In three of the cases alleging negligence the court never dealt with issues of negligence. Instead, the cases dealt with jurisdictional issues of the defendant's immunity from suit. In those cases where the defendant is a public entity, the principle of sovereign immunity generally serves to limit suits unless an exception establishing liability can be found in state statutes or case law. State law varies considerably as to whether the state permits litigation against itself and its agents. In all three cases where jurisdictional challenges were posed by defendants, two public universities and one public school district, the litigation was disallowed based on the state laws of Texas and Mississippi (Lowe, Garza, and Sorey).

The two cases not dealing with negligence addressed problems of concealment of information from an athlete and workman's compensation. In Krueger, the duty of staff involved in the care of an athlete to disclose the extent and nature of an athlete's medical condition was at issue. The court decided that the medical staff had a fiduciary relationship with the athlete requiring that the staff act as trustee in delivering medical care to the athlete-beneficiary. Based on finding of the existence of a trust relationship, the court required all staff to exercise their duties of full disclosure of information about his medical status to the athlete. In Sielicki, an athletic trainer cared for the elbow injury of a professional baseball player and reported the injury to team management. The player was released from the team on the same day and filed for workman's compensation.

Cases Not Directly Involving Athletic Trainers

The search identified four cases which did not involve athletic trainers in any way except by analogy in the reasoning set forth by the court. As a result, these cases are not reported in the findings. All four cases dealt with fact patterns characterized by the illegal practice of medicine in some form. Two involved the scope of practice allowed to acupuncturists; one, the actual establishment of a medical clinic by an unlicensed individual; and one, the manufacture and sale of dentures by a non-dentist.

All involved reasoning by anaology to an athletic trainer's role in treating injuries. In the two acupuncture cases the court viewed an athletic trainer's treatment of an athlete's injuries as permissible in

an emergency situation and not as constituting the unlicensed practice of medicine regardless of whether the state required licensing of athletic trainers (People and Thompson). The court employed the same logic to find that allowing an athletic trainer to tape an athlete's knee or recommend aspirin for pain was not similar to permitting an unlicensed individual to operate a clinic to treat patients (Illinois). Finally, the court refused to equate the manufacture and distribution of dentures by an unlicensed and untrained individual to an athletic trainer's making mouthguards for athletes (Hulva).

DISCUSSION

In reviewing the reported case law from nearly 30 years, we are are struck by the relatively few cases involving athletic trainers. This is especially significant considering the growth in participation in organized sports accompanied by a presumed increase in numbers of injuries. There may be several reasons for this. First, the literature points to relatively few cases where players or parents of players seek recovery from a school or its agents when compared to litigation over injuries arising from playground accidents, physical education classes, classroom incidents or bus accidents. This reluctance to sue is also suggested by the fact that a relatively greater number of suits by spectators appear to arise from a generally smaller number of injuries (5). However, the data for these statements are almost eighteen years old and require updating.

The fact that athletic trainers working with football appear to be at a greater risk of litigation than those working with other sports, confirms the literature on this topic generally (1,8). Similarly, athletic trainers working at institutions of higher education seem to bear greater exposure to litigation than those in other settings. This may be related to several factors: the employment patterns of trainers during the period studied; the perception of greater loyalty and personal attachment to local school district personnel than to those at the college and university level; and the economic stakes for the athlete of participation in collegiate athletics. The cases all dealt with athletic trainers in traditional practice environments. As trainers enter private practice in sports medicine clinics and in health clubs, they are faced with greater legal exposure from the general public that may not have the same loyalty but do have a vested economic interest in the clinic and the care given. For that reason, the athletic trainer in the private setting may run a greater risk of liability than the athletic trainer in the traditional setting.

The logic of economics may provide a stronger explanation for the relative paucity of suits against athletic trainers. The motivation for litigation by any plaintiff is recovery of his or her monetary losses arising from the injury. In order to recover those losses a defendant must have sufficient economic means to compensate for the loss. There is no point in suing a penniless defendant. Traditionally, athletic trainers do not have "deep pockets." Thus, athletic trainers may well be less attractive potential defendants than the institutions employing them or the physicians who treat injuries. There was no case in this study in which the athletic trainer was the sole defendant. The economics of litigation may operate to minimize the exposure of athletic trainers to the risks of litigation when the sponsoring institution or organization cannot be implicated.

Despite the relatively few cases dealing with athletic trainers, the number of cases occurring since 1980 may point to a growing involvement for trainers in litigation. The fact that 8 of the 13 cases occurred in postsecondary institutional settings parallels the reported growth of litigation against these institutions during the recent decade (4,6). Some stabilization in the growth rate of litigation against educational institutions may be occurring (9). Litigation involving athletic trainers may reflect these larger needs.

Identification of the multiplicity of complex and interdependent roles and responsibilities assigned to the athletic trainer in delivering care to athletes rather than the frequency of litigation emerges as a major implication of this review of the case law. The courts viewed athletic trainers as jointly liable, along with coaches, physicians and employers, in several cases. This implies that athletic

trainers share responsibility for, as well as exercise control over, situations leading to injury. Yet, athletic trainers in most employment contexts may act primarily as agents for decisions of physicians, coaches and employers. The case law, however, appears to mute some aspects of these traditional authority relations. In Gillespie, a student trainer was held to the same standard of performance as that for physicians rather than to the simple, first-aid standard that might apply to coaches. In Sorey, the court found the trainer to hold discretionary decision-making authority to act in a capacity similar to that of a physician. In Sielicki and Krueger, problems of confidentiality and disclosure of information between an athlete and team personnel posed and important issue. While the courts did not resolve these issues for athletic trainers, the multiple and conflicting loyalties and duties owed by a trainer to both athlete and employer were outlined.

Korpela's (4) study of the tort liability of educational institutions for accidents occurring during school sponsored events reviewed the case law in order to identify those duties owed the athlete by such institutions. Recent texts confirm that these duties include giving adequate instruction, supplying proper equipment, making a reasonable supervision of the contest and employing proper post-injury procedures to protect against aggravation of the injury (3,8). Our study confirms that, at this point in the development of the law, the duties owed the athlete by the athletic trainer are indistinguishable from those assigned to the organization or institution generally as well as to the physician and coaches. To date, the courts make no distinction or allocation of responsibilities between the athletic trainer and other personnel involved in the supervision of athletes and sports. While the courts do not distinguish between the appropriate roles of athletic trainers and others involved in caring for athletes, programs of athletic training education and the requirements of state licensure of athletic trainers delineate specific areas of responsibility and performance for athletic trainers. Although addressed by implication, the courts have not spoken to the problem of the scope of practice for athletic trainers. Neither have they dealt with the issues of overlapping and conflicting responsibilities of the various personnel responsible for the care of athletes. The broad interpretation given these issues, to date, appears to increase the potential for further conflict in this area.

The system of legal reasoning employed by the courts operates on precedent. The holding in one case governs the outcome of the next given analogous facts. Despite the relative paucity of cases involving athletic trainers, it is clear from the few cases found that athletic trainers are occasionally sued as responsible parties. In addition, athletic trainers serve on occasion, as reliable witnesses and experts. An attorney seeking to litigate on behalf of an injured plaintiff can look to the group of cases identified in this study to determine whether to include the athletic trainer as a defendant, what obstacles the courts have posed in suing athletic trainers and what duties athletic trainers perform. These cases form the body of precedent to guide courts in future litigation against athletic trainers.

This review of judicial decisions reveals that the courts have not dealt with many areas of practice and responsibility for athletic training. Law is a reactive process. Courts decide only those specific issues actually brought before them. The lack of case law speaking to problems incurred by athletic trainers serves to highlight many issues of practice. Thus, in several cases, general issues were identified but not resolved by a court required to focus on a narrower judicial question. In Sorey, an athletic trainer was assigned the same type of discretionary decision-making authority as the physician. However, by adopting this view of an athletic trainer's role, the court refused to decide the specific question of allocation of responsibility for negligence under the law of sovereign immunity. Two cases dealt with student trainers. In Gillespie, the student trainer performed at a standard expected of a physician. In O'Brien, the student trainer performed actions beyond his competence with serious consequences for the athlete. In neither did the courts raise the larger questions of the proper status, use and responsibilities of student trainers. Similarly, in

requiring full disclosure to athletes courts raised but did not resolve issues of whether the relationship between the athlete and athletic trainer is privileged in any way (Berthelot and Sielicki).

RECOMMENDATIONS

Two recommendations arise from this initial descriptive study. Both speak to the need for additional research relating to the ongoing role of litigation and the practice of athletic training.

First is the continued need to monitor judicial decisions which involve athletic trainers. There is little research regarding the legal basis for athletic training. It is apparent from the data that the number of cases is limited but increasing. As athletic trainers become more numerous and visible, as more states license athletic trainers, and as practice settings become more varied, exposure to litigation will increase. It is vital to a young and evolving profession that trends and patterns in litigation be understood and that important decisions be reported to and discussed by athletic trainers. In this way athletic trainers may best monitor problems of professional practice and move in the most effective and efficient manner possible to improve standards within the profession before external forces impose changes upon athletic trainers. Such self-monitoring can facilitate the maturation process of athletic training as a profession.

A second area of future study involves research to establish baseline information about the actual number of disputes arising from the practice of athletic trainers. This study included only reported decisions of courts, the tip of the judicial iceberg. Further investigation, both as to the number and setting for conflicts arising from incidents between athletes and athletic trainers at the institutional level as well as to the informal procedures used to resolve those conflicts, would be useful. The same might be done at the level of the local courts to identify the number of cases actually filed and resolved at some level before being recorded in the legal reporting system. For reasons described earlier, this would be a difficult task. If done, however, the information could give the profession of athletic training a better picture of what dangers lie unseen below the surface as well as of what procedures most readily facilitate resolution of disputes involving athletic trainers prior to actual litigation.

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LETTERS TO THE EDITOR
Athletic Training, JNATA, 26:6-8, 1991

Editor's Note:

The following letter from Dr. Kumamoto and his correspondence from the Illinois Department of Professional Regulation were so strong that I invited responses from the author of the article in question. In addition, two dentists who have expertise in sports medicine, and who periodically review manuscripts for us, were asked to respond. After reading these, I am sure you will want to re-evaluate your own practices and the laws in your state.

Dear Dr. Knight:

I need to inform you of some problems that might arise because of an article that was published in your Fall 1990 Athletic Training, JNATA. The article in question was written by Scott T. Doberstein and it was entitled "A Procedure for Fitting Mouth-formed Mouthguards." The article implies that mouth-formed mouthguards may be altered by athletic trainers. In the State of Illinois, the alteration or adjustment of a mouthguard by an athletic trainer constitutes the practice of dentistry, which is illegal. I have enclosed a copy of a letter from the Department of Professional Regulation which answers questions I asked about mouthguard fabrication by athletic trainers.

Each state differs in the regulation of dental procedures performed by auxillary personnel, and I think that you should inform your readers to check the law in their particular area.

I know that it is difficult to find dentists willing to assist athletic trainers. That is why we have our elective course to teach dentists and athletic trainers to work together. I feel comfortable working with the athletic trainers at our university, and they have done an outstanding job evaluating dental problems in athletes. The Academy for Sports Dentistry is continually trying to get dentists to volunteer their services to athletic programs. I would urge athletic trainers to recruit dentists in their area.

Perhaps I misinterpreted Mr. Doberstein's message, but I thought it should be brought to your attention.

David P. Kumamoto, DDS
Department of Operative Dentistry
College of Dentistry
The University of Illinois at Chicago
Chicago, IL

Dear Dr. Kumamoto:

I am writing in reply to your letter of February 5, 1990.

You have asked whether athletic trainers are permitted to adjust athletic mouthguards that were purchased in a store. They are not. Adjustments of an oral appliance, even one that is prefabricated, constitutes the practice of dentistry.

Athletic trainers may fabricate mouthguards extraorally from models poured from impressions taken by a dentist. They should not deliver mouthguards to players

since the fit of mouthguards should be checked by a dentist.

It may be permissible in an emergency situation for an athletic trainer to replant a tooth since this quick action may result in the tooth being saved. The athletic trainer should, after replanting, arrange for the player to be transported to a dental facility or emergency room as quickly as possible.

Should you have any further questions, do not hesitate to contact me.

Barbara A. West
Attorney for the Department
Illinois Department of
Professional Regulation
Springfield, IL

Dear Dr. Knight:

I would like to sincerely thank Dr. Kumamoto for his concerns regarding my recent article, "A Procedure for Fitting Mouth-formed Mouthguards."

I agree with Dr. Kumamoto in that athletic trainers should check their state laws concerning the practice of dentistry, and our roles in mouthguard formulation. However, my article explicitly states several times that athletic trainers should closely supervise, educate, and inspect the mouthguard fitting procedure, which many athletes perform haphazardly or not at all. After all, one of our main roles is the prevention of injury.

It was not my intention to imply that athletic trainers assume the role of dentists. Rather my goal was to educate coaches, athletes, and athletic trainers about the fitting process, and to give them concrete guidelines so. that athletes will receive the optimal benefits from the guard.

I also don't believe that my article implies that athletic trainers may or should alter mouthguards. An unmolded, store-bought, "boil and bite" type of mouthguard gives instructions for individual fitting. If you mean that the initial fitting supervised by an athletic trainer, or anyone else, constitutes an illegal alteration, then how does the mouthguard become formed? Certainly you don't imply that the only person who can assist or supervise the athlete in this critical fitting procedure is a dentist, especially with a $1.00 guard bought at any sporting goods store. This implication severely limits the athletic trainer's role in injury prevention, and compounds his or her job with more potentially serious and needless injuries. In addition, I state effectively that alterations of any kind to the already formed guards are prohibited.

I would again like to thank Dr. Kumamoto for his insight. I look forward to his contributions to the literature on sports dentistry.

Scott T. Doberstein MS ATC/R
Milliken University
Decatur, IL

Dear Dr. Knight:

In response to your inquiry regarding the article on athletic mouthguards and who should place them. I submit my thoughts for your consideration.

The heat sensitive mouthguards, which are issued by athletic trainers in athletic programs and are formed in the mouth, should keep the athletic trainer well within the law in most states. Each athletic trainer should have a dental consultant available to him or her to be sure that it is the case in that particular state. If impressions are made by the athletic trainer and poured up, and a mouthguard constructed on the model, then the athletic trainer would be in violation of the dental practice act in most states. It is unlawful for an athletic trainer to take dental impressions or to alter a retainer or mouthguard in the states in which I hold licensure. I believe this would be the case in most states, although I suppose many states have never addressed the problem because it probably is not a problem.

The best answer would be for all athletic trainers to have a dentist as a consulting member of his or her particular program. Together they should outline, within the law of that state, their approach to the mouthguard situation. This would allow the athletic trainer to do most of the mouthguards--as is presently the case, but would also allow the dentist to be available for special situations where adjustment or special fabrication is necessary. I believe most dentists would readily respond to be of assistance, as prevention is really what

dentistry is all about.

Richard C. Whitehead, DDS
St. George, UT

Dear Dr. Knight:

I have read with interest the article, "A Procedure for Fitting Mouth-formed Mouthguards" by Scott T. Doberstein in the Fall 1990 issue of Athletic Training, JNATA and I believe some comment might be appropriate.

Although I am not an attorney, I believe that certain statements in the article may be in conflict with dental practice laws in some states. Though laws differ in the various states, such statements as "it is important to educate athletic trainers because they understand the advantages of this vital piece of protective equipment, and are responsible for the proper fitting and supervision of its use" and "Eastern Illinois University athletic trainers have had a reasonable level of success in fitting the intraoral mouth-formed guards using the procedure below" may not be in concert with dental practice laws in other states. "Fitting" mouthguards may be considered (in some states) part of the practice of dentistry. Thus while I support the concept of athletic trainers' monitoring mouthguard use by their players, it might be prudent to be aware of what their state's dental pratice laws do or do not permit.

In addition, one might question the author's statement, "The advantages of this mouthguard when fit properly, can virtually match the efficacy and comfort of the custom mouthguard." No references are provided and I am unaware of literature citations that would support this statement. In fact, surveys of players who have had the opportunity to compare both types indicate the opposite in so far as comfort and distinct speech are concerned.

Another statement that is bothersome is "The gums may bleed slightly showing a red stain on the mouthguard when it is removed." This slight bleeding is the result of the high temperature and the force of the vacuum by the mouthguard on the gums, and does not constitute a pathological concern." While bleeding of the gums may occur as described, it can also be indicative of problems totally unrelated to fitting a mouthguard and of far more significance to the athlete's oral health. Gingival bleeding should constitute a concern for the athlete and the athletic trainer, and follow-up by the athlete's dentist is indicated.

Finally, the article points out quite rightly, in my opinion, the tendency for some athletes to alter their mouthguards to the point of rendering them ineffective. The author's statement that athletic trainers monitor such modifications is well taken.

Obviously a well-fitting mouthguard is an important step in preventing oral injuries, and I think the author is to be congratulated for presenting an effective method by which the athlete can fit his or her mouth-formed mouthguard.

Certainly we are all interested in preventing oral injuries in athletes and a cooperative effort of athletic trainers, team physicians, and dentists can mutually contribute to achieving this goal.

Robert M. Morrow, DDS
Professor and Head
Graduate Division
Dept. of Prosthodontics
The University of Texas
Health Science Center at
San Antonio
San Antonio, TX

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Last year was the first year in the history of football in which there were no reported deaths in high school, college or professional football. There were, however, 12 reported cases of paralysis (quadrapalegics).

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The NCAA says players can't use smokeless tobacco in the College World Series and has banned the use of all tobacco products in post-season play for all sports. "We're beginning to get additional evidence regarding the use of smokeless tobacco," said Fran Uryasz, director of sports sciences with the NCAA.

...USA Today, May 22, 1991

FROM THE SECRETARY-TREASURER

If you have not received your certificate of membership in the Academy of Sports Dentistry, kindly let me know and I will see that you receive one in the near future.

Also, if you have been billed for your dues and have already paid 1991, please let me know.

William H. Olin, DDS
Secretary-Treasurer

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