Abstract: *Alcohol and other drug (AOD) abuse affects every sector of society, and student-athletes are no exception. Because many factors affecting athletes do not affect other students, athletic departments commonly approach prevention through AOD education. Different educational approaches are described in this article, particularly the Athletic Prevention Programming and Leadership Education (APPLE) model. Project APPLE is designed to enable an athletic department to systematically analyze its AOD prevention in seven areas: recruitment practices, expectations and attitudes, education and AOD programs, policies, drug testing, discipline, and referral and counseling. Because athletic trainers often are involved in this process, this article should help them to design more effective AOD programs.*

The Athletic Prevention Programming and Leadership Education (APPLE) Model: Developing Substance Abuse Prevention Programs

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Athletes must address the pervasive issue of alcohol and other drugs (AOD). Although this problem permeates every sector of society, it is news when an athlete is involved in an AOD incident. The negative publicity damages not only the athlete, but the integrity of the sport.[5] Martin and Thrasher[7] suggest that education is the best defense and should be at the top of the pyramid of prevention, with treatment and sanctions following. The athletic trainer, usually the one responsible for implementing AOD programs, should find the most effective prevention program.

In this paper, we discuss the need for thorough and effective drug education. We then describe the APPLE (Athletic Prevention Programming and Leadership Education) model, created and piloted at the University of Virginia, as one possible approach. This model has been funded by two National Collegiate Athletic Association (NCAA) grants for presentation to member institutions (January 1992 and January 1993).

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Drugs in Athletics

The literature suggests many reasons why athletes turn to drugs and alcohol. Student-athletes might feel more pressure to perform than the general student population, both inside and outside the classroom. They might strive to excel, not only athletically, but academically and socially as well. Pinkerton and associates[9] note other pressures that athletes encounter, eg, isolated living conditions in athletic dormitories and long hours spent practicing, training, and traveling. These demands can overwhelm some athletes, who might turn to AOD use in an attempt to cope.[9] These athletes might contend that drugs help them to compete by increasing energy, strength, and endurance; or they might claim that the drugs help them to relax following competition.[7]

Martin and Thrasher[7] identified four behavioral tendencies which might incline an athlete to substance abuse. First, the athlete might be unsure of identity and self-image issues. Because athletes are in the public eye, many are subjected to unforgiving scrutiny and are expected to be role models. On one hand, they could be glorified in the press for athletic excellence and then, on the other hand, ridiculed for some infraction that, to them, is trivial.

Second, the athlete might suffer from an intense fear of failure, complicating the many pressures mentioned earlier. Intercollegiate athletics is no longer just a game. College sports have become big business, and a highly visible college athlete is subject to pressure to win and perform at maximum capacity.

Third, the athlete could suffer from a fear of aggression. While aggression is an inherent aspect of sports, it might be confused with violence directed at opposing players and teams. The negative

connotation might distress the athlete. A defensive back is expected to be aggressive, but an athlete could be better suited temperamentally to play wide receiver. Therein might lie a conflict.

Finally, peer pressure can influence an athlete's behavior. Like their peers, many college athletes have an intense desire to be accepted. In order to join a particular clique, athletes might use drugs, even if this behavior compromises their internal values. Athletes can jeopardize their eligibility if AOD use affects academic performance through absenteeism, inattention, poor motivation, and lack of preparation for classwork and exams.

Successful AOD Education Programs

Athletes represent many facets of society, bringing varied customs, values, and traditions to their sports. Naturally, they tend to exhibit the same tensions, anxieties, and problems as the rest of society.[7] It is, therefore, important to educate student-athletes to identify and control the pressures they encounter. But, what characterizes an effective education and prevention program? While numerous programs have surfaced in recent years, there are few that meet the specific needs of the college athlete. Several universities now have made AOD information a mandatory part of freshmen orientation. Often held at the beginning of the school year, these programs usually provide basic AOD education and general information regarding institutional policies.[10] This general information might benefit some students; however, for athletes, the effects are dubious at best as a result of rigorous, time-consuming training schedules.

Many universities require their athletes to listen to major speakers brought in during the year. Attendance is usually mandatory, but results do not seem to be meaningful because the speakers and topics are not necessarily relevant to the athletes.

The NCAA suggests drug testing as a deterrent to drug use, and many member institutions have developed more stringent policies for screening and sanction enforcement. All athletes who have tested positive need effective treatment programs prior to returning to their teams. Unfortunately, the positive test results of important team members are sometimes ignored, and sanctions are not always enforced.

At the college level, many AOD abuse prevention/education programs target students in need of treatment. Other programs provide general educational information in the hope that knowledge will somehow deter the college student from abusive patterns. We felt that any programs aimed at athletes must specifically address their concerns, including the physical demands of particular sports, the misguided assumption of immortality so prevalent in this age group, protection of athletes' privacy and confidentiality, peer pressure and problems related to frequent travel.[7,10] In addition, the athletes needed to have a sense of ownership in the program to ensure their cooperation.[6]

Grossman[6] found that many drug education programs use the "shotgun" approach. A great deal of information is tossed out to the student population at large in the hope that it will "hit" someone. No specific audience is targeted by these broad brush programs and/or educational campaigns, and there is little evidence to show that they affect students' attitudes or usage.[2,4,6]

Historically, prevention models have been divided somewhat arbitrarily into three components: primary, secondary, and tertiary. In order for alcohol and other drug education to be comprehensive, it must incorporate all of these components, from basic information and education through referral and treatment resources.

Primary prevention emphasizes the health hazards and potential dangers of substance abuse to people and populations.[7] Most primary prevention programs target those who have not had problems. These programs urge abstinence within the framework of basic AOD information. However, providing knowledge alone is not sufficient; an effective prevention model must aim at attitudes and behaviors.[2,4]

Secondary prevention focuses on early identification and referral to appropriate resources. Emphasis is on examining the source of the problem and developing strategies to curtail sustained, long-term use and/or abuse.[7]

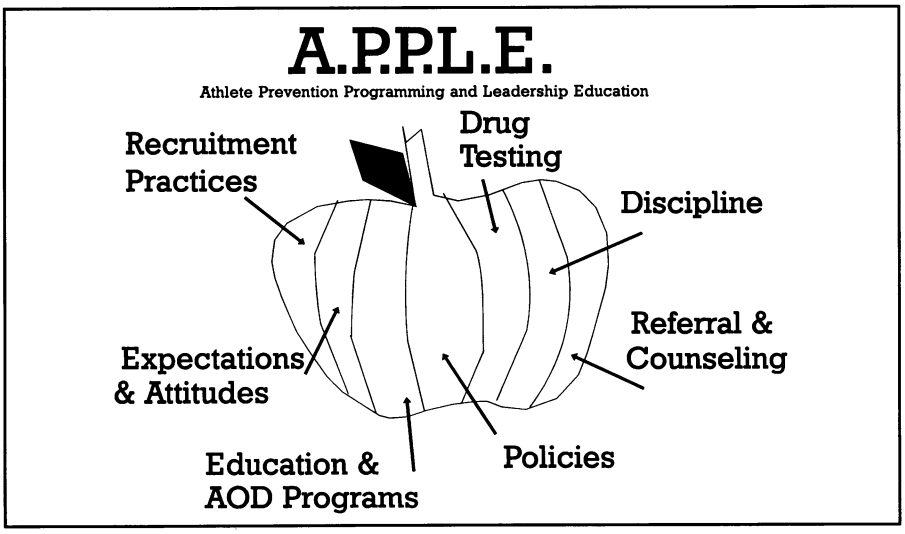
Tertiary prevention includes treatment in both inpatient and outpatient settings. It is directed to those with more serious, long-term problems and might include hospitalization and detoxification.[7]

Pinkerton and colleagues[9] suggest a focused, three-component model.[7] The first component, the short-term approach, includes preventive measures that might involve one or more of the following: environmental and time management, coping skills, relaxation training, and thought stoppage. Cognitive behavioral therapy is the second component, focusing on mental imagery and practice to overcome the potential side effects of anxiety, depression, and anger that might lead to substance abuse.[9] The third aspect of this model centers around career/vocational counseling. Many college athletes, intoxicated by the glamour and spotlight of sports, have neglected the skills necessary to develop a life after athletics.[9,10] The anxiety of entering the real world is alleviated to some degree if the athlete succeeds academically and chooses an appropriate career.

Various Education/ Treatment Approaches

Because substance abuse is considered one of society's most serious problems, education and prevention programs are becoming more common. Businesses, organizations and institutions recognize that programs must emphasize education, prevention, and rehabilitation, rather than punishment.[5] AOD education must encompass the reasons for use and abuse, behavioral characteristics of users, physiological side effects, and psychological issues.[3]

The etiology of substance abuse in athletics can be associated with the physical, psychological, and social demands created by the sport.[7,9] It is, therefore, important to fully comprehend each demand and devise worthwhile programs that will meet the needs of the athletes involved.[7] Inconsistencies in substance abuse education might hinder the success of these



APPLE Model for AOD Evaluation.

programs, perhaps as a result of obscure goals and objectives. Athletes, accustomed to structure and discipline, might find it difficult to operate successfully within a prevention/education model that is not clear.[6,10]

There is no ideal substance abuse education program. The particular educational goals for the athlete must be derived through thorough and specific appraisal.[10] The nature of the sport, policies and procedures regulating substance abuse at the individual institutions, drug testing policies, and the availability of psychological and substance abuse treatment resources are all factors that must be considered in addressing the needs of the athlete.[10]

All too often those involved in sports are connected with allegations of date rape, paternity suits, driving under the influence, drunk and disorderly conduct, and academic failure. Issues related to these concerns should be addressed as part of the education/prevention program.[1,6] Furthermore, different teams have specialized interests which should be addressed. For instance, football players might need to address date rape; the lacrosse team might need to concentrate on binge drinking; and cross country runners might have a greater interest in eating disorders.

Various Treatment Programs

Professional sports, in contrast to college athletics, have institutionalized league-wide policies and procedures that govern the education and rehabilitation of AOD users.[7,10] The following are the general components of three education/prevention programs that are being used actively.

The education program used by the National Basketball Association (NBA) mandates that all players within the league must attend two seminars over the course of one year and that rookies must attend an additional session during the preseason.[7,10] This additional seminar introduces the athlete to available resources and points out potential problems in professional athletics that could lead to substance abuse. This NBA agreement has a written statement endorsed by the players. Unfortunately, this program fails to address the ethnic, social, and psychological adversities that the athlete faces, and family involvement is minimal during rehabilitation.

The program of the National Football League focused initially on the athlete as an individual, but recently has been expanded to include pressures associated with sport involvement.[7] The primary prevention strategy includes drug education for players, as well as coaches.[7,10] The educational seminars deal with attitudes and ideas surrounding AOD use.[7]

The Cleveland Clinic Program includes primary, secondary, and tertiary prevention and educational elements.[7] The program is team-oriented and functions on the "links in the chain" theory. The links represent all facets of the organization from owners to management to coaches to players. Group therapy, known as the "Inner Circle," is used, specializing in self-help and spiritual directives and including a family program.

Background of AOD Programs in The Department of Athletics at The University of Virginia

The athletic department at the University of Virginia has had a drug education and testing program in effect since 1985. Prior to 1989, all student-athletes attended a mandatory meeting and educational session. Athletes were required to sign testing consent forms before checking out equipment for athletic participation. The department also provided speakers on AOD use and abuse, but this education component of name speakers and law enforcement personnel was mostly an ineffective, superficial prevention program; the athletes were inattentive and expressed displeasure at having to attend presentations they felt were a waste of time. General topics for the mass meetings often did not address concerns of the individual teams. Despite mandatory preseason testing and random drug testing throughout the year, despite referral for positive tests, we had no prevention and educational program designed specifically for each sport. As a result, the athletes were indifferent.

Because the AOD education did not seem to meet the needs of the athletes, the department turned to the University's Institute for Substance Abuse Studies (ISAS) for assistance in devising a more effective program. This request resulted in the Student Athlete Mentor (SAM) Program.

The SAM Program

Peer education has been shown to be an effective means of presenting prevention material[8]; therefore, each athletic team was asked to express its specific need regarding AOD information, thus becoming actively involved in programs tailored to those needs. Each team elects individuals who are

regarded as natural helpers, comfortable confidantes, and leaders.

SAMs are not watchdogs over their friends; rather, they are students whose peers admire them. They provide useful information, but they are not expected to report their friends to any authority or to reprimand teammates in any way. As internal resources for their organization, SAMs arrange education and prevention workshops and are available to listen to problems. They are aware of referral resources and can help teammates look at alternative solutions to problems that might arise.

The elected SAMs attend two training sessions that deal with a variety of issues student-athletes face on a daily basis. The first training session includes alcohol awareness activities, an overview of problems commonly experienced by college students in relation to alcohol abuse, and discussions about issues specific to their own team. Most of the session is conducted in small group discussions, and the policy of confidentiality and anonymity is stressed throughout the training. The second training session emphasizes the skills, information, and referral sources that SAMs might need to use.

Ironically, most of the SAMs requested further training sessions to address areas not discussed in the initial sessions and to expand on previously presented information. The success of the training sessions could be related to the fact that athletic department personnel are not present, allowing the athletes to speak and interact more freely.

After SAMs complete their training, they are asked to design and provide a substance abuse seminar for their respective teams. Educational sessions do not have to be confined to AOD abuse issues. They can address issues involving eating disorders, date rape, or any issue relevant to the individual teams. The SAMs remain in close contact with an ISAS staff member for ongoing support and additional information as needed.

The Athletic Prevention Programming and Leadership Education (APPLE) Model

Because the athletic department plays such a vital role in the lives of athletes, its hierarchies, policies, and procedures must be considered. Although the athletic department, as part of the broader university, is subject to university-wide rules and regulations, the department often serves as the major focus for the student-athlete. The athlete's primary perceptions regarding AOD use stem from the way this department enforces, or conversely ignores, policies and regulations.

Student-athletes often feel that the athletic department has its own policies and procedures and is not governed strictly by the entire university policy, a belief that is reinforced by coaches, athletic trainers, and other athletic department staff. It is essential that the athletic department's structure, both formal and informal, be examined and that policies and guidelines be rewritten if necessary in order to provide comprehensive, meaningful AOD prevention for the student-athlete.

With this in mind, the APPLE model was created for the University of Virginia's athletic department. This comprehensive model, designed specifically for athletes, includes both primary and secondary prevention. The goal is to enable an athletic department to analyze its position on AOD use along a continuum from enabling messages, those that implicitly or explicitly sanction AOD use, to proactive prevention, an emphatic, consistent "no-use" message.

The APPLE model consists of seven segments or "slices": recruitment practices, expectations and attitudes, education and AOD programs, policies, drug testing, discipline, referral and counseling (See Figure). Policies form the core of the program. While they must dictate a strong peer leadership component, effective AOD policies require active involvement of administrators, staff, coaches, student athletic trainers, cheerleaders, and managers, anyone who is involved directly with the athletic department.

In response to issues raised through the SAM program, the University of Virginia athletic department applied the APPLE model during the fall of 1990. All areas of the athletic department were included as integral elements. However, the success of the program resulted from a strong peer education model which provides the bulk of prevention and education programming.

In order for athletic departments to develop effective policies and programs for prevention, education, and referral, they must examine carefully each slice of the APPLE model, making use of available local resources.

Recruitment Practices. The athletic department must examine all information that is relayed to a potential student-athlete regarding AOD use at the school and within the department. Prior to a recruit's visit, the department will schedule activities, examining them for implicit and explicit messages regarding AOD use. The athletic department must not promote or condone illegal AOD activities of any sort. All AOD messages, verbal and written, formal and informal, must be consistent with school and department policies. The athletic department should recognize that the behavior of the recruit usually will reflect the behavior of the host, who bears the legal responsibility for the recruit.

For example, getting a recruit intoxicated: Is this considered entertaining the recruit? Is it expected by the coaches? Obviously, this is a legal dilemma, as it is unlawful for individuals under the age of 21 to purchase and/or consume alcoholic beverages. Ramifications could include loss of eligibility, criminal charges, or even loss of life in an accident.

Expectations and Attitudes. Expectations and attitudes of the athletic department as they relate to both the academic and athletic performance of the student-athletes need to be examined as well. Here, the athletes' roles within the university community should be defined, and athletes should be reminded that they are students first and must excel in the classroom. A mandatory session explaining this philosophy should reach first-year and transfer students. All too often, administrators, coaches, and athletic trainers unconsciously convey enabling messages regarding AOD use. It is crucial that these individuals unequivocally communicate proactive prevention, leaving no room for interpretation.

Coaches, staff, student-athletes, and others affiliated with athletics must maintain a consistent no-use message, supported by their own actions and reinforced during orientation and throughout the year. Personnel in the athletic department must adhere to the same standards expected of student-athletes.

Education and Programs. By far the most important aspect of the APPLE model, the education and programs slice must clarify misconceptions that might perpetuate abuse. Ideally, all incoming athletes should participate in a mandatory education program conveying no-use messages for everyone under 21 years of age.[3] All students should be informed about federal, state, and local laws and regulations, including those of the university. Informational materials and programs must be made regularly available, through identified resources, and must be tailored specifically to topics pertinent to the student-athletes. Student mentors or peer counselors must be trained and supervised in dissemination of AOD information and communication skills. Coaches and staff should be well-informed about AOD facts, especially as they relate to student-athletes.

Policies. The athletic depart-ment's AOD policies must adhere to university rules and regulations. In addition, they must incorporate relevant federal guidelines. Clearly defined drug testing standards, procedures, and sanctions should be sent to students and their parents and/or guardian at the time of the student's acceptance. The policies should be well disseminated, uniformly enforced, and regularly reviewed; they should be clear, accurate, and uncompromising.

Drug Testing. The steps for collection and administration of drug testing must conform with the NCAA guidelines. Privacy and confidentiality of testing procedures can be ensured by upholding the chain of custody, which places the responsibilities of testing on many groups and persons, not on a single individual. The chain at the University of Virginia involves coaches, university police officers, the head athletic trainer, the athletic director, a private courier, and a private testing firm. This chain of custody maintains the integrity of the collection and provides an effective means of deterrence, prevention, and referral for athletes. It is important to portray this slice of the program as preventive and supportive, not as punitive.

Discipline. Disciplinary actions for infractions of AOD-use policies must be appropriate to the infraction, clearly specified, well disseminated, and uniformly enforced. They should apply to all sports and should not be administered separately by individual coaches for individual players. Disciplinary action must be uniform for negative or undesirable behaviors, regardless of the status of the student-athlete.

Referral and Counseling. Procedures must be established to ensure ready access to further education, consultation and/or professional assistance for athletic department staff, and student-athletes. A trained peer mentor can refer problems appropriately; however, specific departmental policies must include procedural issues associated with referral, for example, timeliness, confidentiality, and expected follow-up.

Counseling resources should include a range of modalities compatible with athletic training and travel schedules. When athletes express the desire to join a support group or enter counseling, the athletic department must immediately make the necessary arrangements to facilitate participation, while maintaining privacy and confidentiality.

Conclusion

The APPLE model for education and prevention is thorough and comprehensive. The peer mentor component should be expanded to give coaches, administrators, and graduate assistants an opportunity to undergo the SAM training. These vital individuals need the skills to effectively manage problems associated with AOD abuse or its ramifications.

The APPLE plan follows the guidelines set forth by Martin and Thrasher,[7] Pinkerton and associates[9], and Wadler and Hainline[10] as discussed earlier. However, the SAM program is unique to this model. The premise is that athletes will turn to their teammates or peers first when seeking help.[10] The SAM program can be the linchpin of effective programming: students take the responsibility and initiative in the development of prevention/education programs and in appropriate referral of their peers to counseling and rehabilitation programs.

The prevalence of alcohol and drugs in the college environment threatens the nature of pure competition, and a comprehensive approach to AOD use must meet the needs of the athletes. To offset the pervasiveness of substance use, institutions are implementing programs to uphold principles and ethics associated with competition. The institutions and organizations involved have taken "wide latitude in defending against pernicious influences, such as drug abuse."[10]

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