

Administrative Issues in the Management of a Sports Medicine Program

DANIEL S. ROWE, M.D.^a, AND KATHE P. FOX, M.Phil.^b

^a*Director, Yale University Health Services, Professor of Pediatrics and Public Health, Yale University School of Medicine, New Haven, Connecticut;*

^b*Doctoral Candidate, Department of Epidemiology and Public Health, Yale University of School of Medicine*

Received February 14, 1980

Sports medicine is a subspecialty of medicine which has recently gained prominence in this country. It is usually practiced in conjunction with a specific program of sports medicine in an institutional setting, such as a university. This article describes the integration of sports medicine and the department of athletics at Yale University. The athletic medicine department, as it is called, treats both the injuries and other medical problems of students participating in the organized athletic programs, be they intercollegiate or intramural, which are organized by the University. Problems that arise both medically, such as when to play an injured player, and administratively, such as who should supervise trainers, are discussed. Guidelines are given for choosing the director of this program, as are examples of how to deal with problems between the physicians and the coaches.

The subspecialty of sports medicine, like many specialties in medicine, spans a number of areas of professional expertise. The research and clinical skills of this discipline aid not only the injured athlete, but others far removed from the playing fields, such as the cardiac patient. This subspecialty has grown remarkably in the last decade, spurred by a general interest in exercise on the part of the American public. However, sports medicine is still practiced primarily in settings which care for athletes, whether they are professionals or amateurs.

Historically, one of the largest sponsors of various forms of sports medicine programs have been universities because of their many and varied athletic programs. Outside of a few highly popular professional sports, such as football, basketball, and baseball, universities offered the only other setting which could support a total sports medicine clinic.

Many university and professional sports medicine programs have grappled with the conflicting interests of the team as a whole and the needs of the individual player. Part of this conflict can be resolved by the design and administration of the sports medicine clinic. A particular sports medicine clinic, the Yale University Athletic Medicine Department, has been developed and provides a program that meets the health needs of the athletes. The Athletic Medicine Department is a division of the University Health Service, which has two other components: the Division of Occupational and Environmental Health Services and the Yale Health Plan, a prepaid group practice.

The University Health Service has three parts, the largest of which is the Yale Health Plan, the first University sponsored prepaid group practice in the United States. For the past nine years it has served students, faculty and staff, and their dependents. All students are automatically enrolled upon matriculation, and employees are given the option of joining either an indemnity program such as Blue Cross and Blue Shield, the Yale Health Plan, or a federally qualified health maintenance organization. Since 1971 there has been an average enrollment of 65 percent of the faculty and staff. The University Health Service is located in a 90,000-square-foot, six-story, limestone-facaded facility on the main campus of the University. Included in the building are outpatient areas, a laboratory, X-ray department, physical therapy department, and a 38-bed infirmary. There are 29.5 full-time equivalent physicians, all of whom have faculty appointments in the School of Medicine, and have had postgraduate training in one of the primary or secondary care specialties. Tertiary care is provided, upon referral, by members of the full-time faculty of the School of Medicine. The service engages new health professionals, such as physicians associates, nurse practitioners, and nurse midwives, as providers of care and has 150 other nursing and clerical personnel. There are regularly scheduled office hours from nine to five Monday through Friday and emergency services 24 hours a day, seven days a week. A physician is always in the building. There are approximately 110,000 outpatient visits to a health care provider each year. Of this total about 5,100 visits are to the Athletic Medicine Department.

The Athletic Medicine Department was designed in keeping with the philosophy of the National Collegiate Athletic Association (NCAA). One of the main purposes of that organization, as stated in its bylaws, is, "to initiate, stimulate and improve intercollegiate athletic programs for student athletes and promote and develop educational leadership, physical fitness, sports participation as a recreational pursuit and athletic excellence" [1]. More specifically, the department emphasizes the value of physical fitness as a recreational pursuit for the student athlete. The goals and objectives of the Athletic Medicine Department are as follows:

1. Provision of high quality health care for the student athlete
2. Promotion of the need for appropriate physical conditioning for athletes prior to their engaging in any organized athletic activity
3. Provision of medical care for illnesses and injuries which take into account the future of the athlete. The Department puts the health needs of the student before winning
4. Provision of a program which uses new health professionals e.g., physical therapists and nurse practitioners
5. Provision of an educational experience for house officers, medical students, and other health professionals
6. Promotion of the need for well-organized sports medicine programs and to contribute reports on the activities of the Department to the scholarly literature
7. Performance of related research which includes both the laboratory and the health care delivery aspects of sports medicine

The Athletic Medicine Department operates primarily in the University Health Service and is under the direction of an orthopedist with special expertise in sports medicine. The Department also includes three part-time trainers, two of whom have degrees in physical therapy and are supervised by the orthopedist. Clinic sessions are held each weekday morning during the academic year and on Sunday mornings

during the fall sports season. The clinic has two sections: the trauma section which specializes in the treatment of students with injuries and the medical section which specializes in the management of students with all other medical problems. All students who participate in either intercollegiate or intramural sports in season are eligible for care. The athletes in the trauma section are first examined by one of three trainers, and then, if indicated, by the orthopedist. If any special procedures are required, such as X-rays, physiotherapy, or the application of casts, this is done immediately after the visit or as soon as an appointment can be arranged in the case of physiotherapy or invasive X-ray procedures. Approximately one-third of the 12,600 visits to the physiotherapy department are made by student athletes.

The trauma section always functions as a walk-in service. Since it is sufficiently staffed, waiting is not a problem. In addition, the ancillary services required are readily available. This service, like the 12-and-under lines at the supermarket, is very appealing to the student athlete and is one of the major strengths of the clinic. The providers are all former athletes who have participated in organized sports. This particular background makes it easier for them to understand and recognize the special needs of the student athlete. Three times a week the trauma section is expanded to include other patients who engage in recreational athletics on referral from one of the providers at the health service. Most are joggers, some of whom are serious marathoners, and others are tennis players. Many are in need of orthotics which are made in this clinic for all athletes.

In the medical section all students with a health problem are first evaluated by a medical nurse practitioner and then as indicated by either one of two primary physicians who are part-time members of this department. They also may be referred by one of these providers to any one of the secondary services in the building or to a tertiary consultant at the School of Medicine. Follow-up services are provided as required by the same staff so continuity of health care is maintained.

A student's medical record is specially identified if he or she participates in either intercollegiate or intramural sports. This is done for several reasons. First, the University Health Service uses a single medical record system. Second, an athletic disability list, which includes all who are not allowed to participate, is generated by the professional staff and maintained on a daily basis. It is also distributed to all of the coaches. A note is made in the athlete's medical record if his/her name is on the athletic disability list. Once an athlete's name is placed on this list by a health care provider he/she cannot participate until it is removed. Only one individual, the physician in charge of the Athletic Medical Department, can remove someone's name from the list. Third, the providers who work in the Athletic Medicine Department cannot be expected to be present in the Center 24 hours a day, seven days a week, and the student athlete might be seen by another health care provider. In this instance, the medical record is again returned to the physician in charge of the Athletic Medicine Department and he will arrange for future disposition if indicated. The only time when a record is not made available to the Athletic Medical Department is when a student athlete is receiving ongoing care by one of the members of the Department of Mental Hygiene. No information from that department is transmitted to anyone without the specific permission of the patient. Fourth, the medical record is used to identify services other than Athletic medicine encounters, e.g., physiotherapy, which are used by student athletes, for the purpose of charging the cost of these services to the athletic medicine budget.

The sports medicine program of the Athletic Medicine Department extends beyond the walls of the University Health Service building. For instance, the physician in charge of the program or a colleague is present when teams engaging in

contact sports such as football or hockey are practicing or playing games. The amount and type of coverage is determined by the volume and severity of injuries which are related to that particular sport. During the academic year there are times when it seems as if some type of organized sporting activity is going on 24 hours a day, seven days a week. A physician also travels with the varsity football team to away games. Trainers accompany all other intercollegiate teams.

The cost of this program to the University for the 1979-1980 academic year will be approximately \$214,000. Forty-six percent, or \$99,200 of the total, is spent for salaries. This excludes the trainers' salaries of approximately \$30,000 which are paid by the Athletic Department. Thirty percent, or \$64,300, has been allocated for such expenses as the cost of transporting patients, laboratory, and radiologic services as well as ambulatory surgery and consultant professional fees. Ten and four-tenths percent, or \$22,400, has been budgeted for hospital costs incurred on behalf of the athletes. Most of the patients admitted to the hospital have orthopedic procedures, although there are always a few patients admitted to other services, particularly otolaryngology, neurosurgery, and ophthalmology. The remainder of the expenses are for administrative services, such as the use of telephones, postage, and data processing. The latter category, data processing, will increase incrementally in future years when an automated athletic medical history and incident reporting system is implemented. The cost of this program is expected to be substantial. Obviously with a financial commitment of this magnitude the University understands the need to maintain the health of student athletes.

ADMINISTRATIVE PROBLEMS

The success or failure of a sports medicine program is contingent upon multiple factors. Two of the most important are the quality of the physician in charge and the support the program receives from the health service administration. A word about each is in order. Obviously, when a physician is chosen to head the program he/she must have demonstrated the ability to interact with other professionals and with a group of patients who are frequently quite anxious about their health. Ideally this person should also have shown a competence for administration. If this is not the case, sufficient administrative assistance must be readily available. Finally, it is helpful if this physician has personal experience as a participant in organized sports.

If the Athletic Medicine Department is part of a larger health service, then the role of the director of the health service is equally important for the program's failure or success. He/she must offer continuing direction and support of all types. It is essential for both individuals to have a good working relationship; one which cuts both ways is most desirable. The chief of the Department must be given the authority to exert maximum control over the system and yet he must act in a responsible manner in the opinion of the director.

The chief of the Department is given broad liberty to act independently. Since the program's initial organization, only periodic meetings have been needed to discuss changes and problems. The chief of the Department deals directly with coaches, trainers, and the administrators of the athletic department, and the director does not become involved unless there is a problem which the chief cannot solve. He is expected to be, and actually is, fiscally responsible for his budget. He is also expected to, and actually performs, research and supervises the training of students and house officers. The chief of the Department is professionally responsible for the activities of the trainers. He participates in their selection and their assignments to the various sports. Since the trainers are not constantly involved in the provision of health care,

they are used for other activities. These assignments are made by the Department of Athletics and can be the source of conflict between the two departments. In addition not all of the trainers work in the clinic, so supervision is somewhat limited. The chief of the Department communicates with the coaches through the athletic disability list and the trainers when one of the student athletes is unable to participate in a particular sport. This indirect communication removes from the physician the need for defending his decision whether to allow a student athlete to participate.

With the enactment of Title IX in 1976 and the introduction of equality for women's sports, the number of students eligible for care in the sports medicine clinic rose dramatically. Guidelines for medical care of these women were developed by the Association of Intercollegiate Athletics for Women. The guidelines included a requirement for a complete physical examination for each woman prior to her engaging in any organized sport, regardless of the season. This requirement caused havoc in the athletic medicine department, particularly since several years ago the department had eliminated annual physicals for all athletes, male or female, except those participating in varsity and freshman football. All that was required from the others was the completion of an interval health history form which updated recent medical information. If evidence of a change in the health status of the student athlete was detected, the athlete was re-evaluated. Based on our own experience, the department hopes to be able to eliminate varsity football physicals in the future [2]. This will be possible because the student athlete receives most, if not all, of his health care from the Athletic Medicine Department. His medical history is quite familiar to all providers. The problem of the physical exams for women athletes was quickly solved by describing and defending the department's policies to the governing body of women's sports organization. The addition of women's teams with its infusion of patients required additional professional support for the trauma section. The medical section continues to be able to cope with the load without any increase in personnel.

DISCUSSION

The Athletic Medicine Department's major goal is the provision of high quality health care. What follows is an approach which is essentially conservative in nature in the treatment of injuries and illnesses. Primary consideration is given to the present and future health care needs and career goals of the student athlete. Winning is not the major consideration. Obviously, this approach does not always make coaches very happy, particularly when their star player is unable to compete. Some coaches approach this philosophically and do not complain; others, on rare occasions, pay no attention to the disability list and play a student athlete who is ineligible for health reasons. When this latter situation occurs and is identified, the chief of the Athletic Medicine Department tells the Director of Athletics, who then reprimands the coach and it is hoped that this never happens again. Like most other things in the practice of medicine, good communication between coaches and health care providers can prevent such problems.

Another major area of departmental concern is the safety of the athlete's equipment. At times, the physician finds himself in conflict with a coach over the use of certain safety equipment which may interfere with an athlete's playing ability. For example, a recent controversy involved the use of face masks for hockey players. Masks have been worn by high school teams for a number of years and there has been a significant decrease in the number of facial injuries for those participants. For the past several years our health care providers have advocated the use of a mask. Since the mask was not a requirement of the National Collegiate Athletic Association, our

coaches and players were reluctant to use it; its use could conceivably put them at a disadvantage with their opponents who were not using the mask. The matter was finally resolved when the East Coast Athletic Conference, on the recommendation of the team physician representing this organization, mandated the use of this equipment. In our instance at least, this caused major problems and recriminations between the health care providers, the coaches, and athletes. Resolution will take time and patience. Efforts to re-establish good communication and relationships between the two staffs are under way.

Expansion of the patient population in the Athletic Medicine Department continues with each ensuing year by the addition of newly recognized teams. Students from the graduate school who are not involved in organized sports can see no reason why they should not also be included in the day-to-day program if they are recreational athletes. The undergraduate, in their opinion, does not deserve the special attention he/she is receiving. Unfortunately, it is impossible to provide service to all. There is a limit to the number of providers available and the funds to hire additional professionals are not presently available.

Finally, there are two other issues which should be discussed. They are: (1) who should hire and supervise trainers, and (2) should a sports medicine program be a section of the University Health Service or the Department of Athletics?

These two subjects are linked and need not be discussed separately. There are many schools who have their sports medicine program directly aligned with the athletic department. The potential for impropriety is kept under control by having a governing board with broad representation. In our opinion, high quality health care and close communication among providers cannot be maintained without having the program directly responsible to the University Health Service. There is greater opportunity for the provider to be objective about the health care needs of his students. The location of the service in a facility which houses a multispecialty group practice leads to easy access to consultants and ancillary services. If one elects to have the program located in the Athletic Medicine Department, it follows that trainers would be part of the service.

CONCLUSIONS AND RECOMMENDATIONS

After ten years' experience we have reached the following conclusions:

1. Not all students can expect to receive management of their medical problems and injuries incurred during a sporting activity in a special unit. The cost is prohibitive. Instead, sports medicine must be limited to those who participate in organized sports.
2. There must be a clear distinction between the goals of the sports medicine program and the athletic program.
3. It is reasonable to substitute new health care professionals such as trainers, educated as physical therapists, and nurse practitioners or physician associates for physicians. The new health care professional can be substituted for a physician at low incident sporting events, such as baseball and tennis.
4. The financing of a satisfactory sports medicine program requires a broad commitment and the continued support of the parent organization.

REFERENCES

1. —: NCAA Manual. Shawnee Mission, KA, National Collegiate Athletic Association, 1976, p 5
2. Rowe DS, Bisbee GE: Preventive Care in the HMO. J Am Col Health Assoc 26:298-301, 1978