What Is Required If Your Athletic Facility Needs a Blood-Borne Pathogens Plan?

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Protecting workers at school or in industry has been the focus of occupational safety laws for almost a century. Since the enactment of the Occupational Safety and Health Act (OSHA) of 1970, workplaces of all sizes and kinds have been implementing comprehensive plans to safeguard employees and on-site visitors. These strict, federally mandated regulations include disaster-contingency plans, evacuation plans, machine inspections, and so forth.

Worker safety at places frequented by the general public (e.g., schools and athletic facilities) sometimes has an unfortunately high profile. When safety plans fail in such places, the news media often portray these failures (e.g., outbreaks of violence or construction fatalities) as indictments of the entire regulatory system, even though the system quietly prevents countless losses each day. In their growing stages, safety plans are often driven by crises; they receive attention only when there is a real emergency.

Protecting workers' long-term health in the above-mentioned facilities (which may be managed by coaches or physical educators) is required under OSHA, but this requirement receives far less news attention, and, unfortunately, far less management attention as well. In fact, while many schools, athletic facilities, and industries have full-fledged emergency safety policies and procedures in place, these organizations are less likely to pay the same attention to less immediate health threats. This may be partially due to the fact that many workplace health problems don't show up until years after exposure. The health effects of chemical exposures, for example, are often chronic, whereas acute injuries (e.g., broken bones or severe lacerations) receive instant attention because they may have immediate life-threatening effects. In addition, chronic health hazards are much harder to spot; detection often requires the use of specialized instruments. These instruments may in turn require extra employee training and maintenance and calibration by qualified individuals in order to ensure top-level performance.

While attention to employee health is a growing management function, specific health risks may not be readily apparent, particularly when health programs are not in place. The obvious risks are to workers whose lives may be threatened. But also at risk are the capital investment in buildings not built to health standards and even the potential for lawsuits against the school or company operating an athletic facility long after hazardous exposures occur.

Infectious Disease and Athletic Facilities

One particular health issue in the workplace is exposure to infectious disease, a latent but real hazard. In an athletic facility, as well as in other parts of a school, various individuals may be at risk for transmission of bloodborne pathogens (BBP) (see table 1). The pathogens most commonly causing concern are HIV and hepatitis B and C.

Recent scientific research shows that HIV is spread primarily by sexual contact with an infected person. However, transmission of the disease to healthcare workers by needle sticks or, less frequently, by contact with infected blood through open wounds or mucous membranes (inside of the nose or eyes) has been documented by the Centers for Disease Control and Prevention (CDC, 1999).

Necessarily, the duties of an athletic trainer or healthcare worker at a school or athletic facility clearly put such employees at risk for exposure. There is little evidence to support the indirect transmission of HIV, due to the pathogen's short lifespan outside the body. The hepatitis B virus, however, is not as fragile outside the body (CDC, 1999). It causes a potentially life-threatening inflammation of the liver, and may pose more of a threat to laundry personnel and housekeeping workers.

The purpose of this article is to show that the potential for tremendous losses in personnel, litigation, and even OSHA monetary fines due to BBP exposures does exist in schools and athletic facilities. It is our contention that many of these risks can be minimized or eliminated through care-

ful planning, management commitment, and implementation of an effective BBP exposure control plan.

Prevention Versus Cure

If a facility complies with OSHA regulations on employee health, prevention is always more cost-effective than cure. For example, detecting the presence of the hepatitis B virus requires rather sophisticated detection protocols and costly lab testing for diagnosis. The vaccine to prevent hepatitis B will cost an employer approximately $140 per employee. Yet compare this to potential worker-compensation costs and hundreds of thousands of dollars in medical bills to treat the disease, and it becomes apparent why administrators need to be committed to safeguarding both employees and student-athletes from this hazard.

Prevention is also paramount because hepatitis B is caused by a virus for which we have no cure (hepatitis C may be even more deadly). Even though prevention of infectious disease does require some extra training, preparation, and equipment, the costs are relatively low, and there is ample guidance available in the form of federal safety regulations (see Occupational Health and Safety Administration, 1991). These regulations are collectively known as the BBP Standard, which can be reviewed in its entirety on-line at www.access.gpo.gov/nara/cfr/index.html or in most college libraries.

Does Your Facility Need a BBP Plan?

If you manage or are employed by a school or an athletic facility, one of your key responsibilities "is providing first aid and assistance to ill and/or injured participants" (Skaros, 1998, p. 55). Are any types of injections made at your facility? Are stitches ever used to close wounds? If the answer to either of these questions is yes, then the full requirements of the BBP Standard are automatically invoked, because the BBP Standard is *mandatory* if contacts with bodily fluids or blood are possible, and fines and civil penalties may accrue for infractions.

Also consider that a BBP can be transmitted through other body fluids that may be found on athletic towels, clothing, and routine athletic laundry, and in various janitorial processes. These considerations are necessary if long-term human suffering among workers and their families is to be averted.

It must also be noted that a BBP plan is not an acceptable substitute for procedures addressing the participation of student-athletes (and others) who have HIV. See NCAA Guideline 2-H for details on this issue (National Collegiate Athletic Association, 1999).

Start with a Written BBP Plan

If exposures are possible as outlined above, a BBP program is necessary, beginning with a written document. This document is an institution-wide plan stating the potential or actual exposures present at your facility and the procedures for handling them.

Once the general policy is stated in the written plan, a careful assessment of problem areas is necessary. All potential exposure areas and job descriptions should be examined. The BBP program manager determines each area that may be a potential exposure site (e.g., a locker room). Program managers must assess the hazards particular to their specific areas as well as the probable level of employee exposure, and address how these hazards will be averted. A wide variety of exposure case studies should be considered. For example, a building service worker cleaning a college residence hall might find a used syringe in a trashcan, and athletic trainers are sometimes exposed to athletes' bloody noses. For each job involving potential BBP exposure, the program manager will need to determine:

- the probability of a given exposure;
- where and how any bloodied materials will be disposed of;
- where the storage containers for bloodied materials can be kept;
- what personal protective equipment employees must use;
- and where special equipment is stored for employee use.

Regulated Waste Disposal. Equipment such as medical syringes must be discarded immediately in puncture-proof containers, and arrangements must be made for containing any leakage. Any reusable containers for these "sharps" must be emptied, cleaned, transported, and stored so that any

Table 1. Athletic Facility Jobs with Potential Areas of BBP Exposure

Job Title	*Typical Duties with Exposure Potential*
Athletic Trainer	Attending to injured athletes; dressing wounds; disposing of used dressings; cleaning and repairing equipment; administering first aid and CPR
Athletic Laundry Personnel	Collecting and washing used towels and uniforms
Physical-Plant and Janitorial Personnel	Emptying containers with possibly contaminated materials; cleaning playing surfaces; repairing equipment
Student Health Nurse; Facility Doctor	Treating and dressing wounds; collecting and disposing of contaminated materials; administering first aid and CPR
Security	Public and crowd control; administering first aid and CPR

injurious contact with the contents is impossible. Other wastes that have been exposed to human bodily fluids (e.g., bandages or disposable toweling) must be placed in color-coded containers that are closeable and constructed to prevent leakage during handling, transport, or storage.

Regular Housekeeping Practices. The athletic facility must be cleaned and decontaminated in a regular fashion once a BBP plan is implemented. Actual schedules and cleaning products are to be decided by the program manager, but any work surface or athletic surface that has been exposed to blood or bodily fluids must be decontaminated immediately. All pails, bins, and similar receptacles must be inspected and decontaminated on a regular basis. Any broken glassware should be treated the same as "sharps," and placed in the same container for disposal. Don't overlook the common broom and dustpan; if they have been in contact with possibly infectious materials, they, too, must be disinfected.

Personal Protective Equipment. Personal protective equipment (PPE) such as safety glasses or rubber gloves must be provided to employees for free. Repairs to reusable equipment or replacement costs must also be underwritten by the employer.

Training and Recordkeeping in a BBP Plan

Perhaps the most crucial element in a BBP program is ensuring that training is provided to each person whose job is associated with a potential exposure. This training must be treated as on-duty time for all employees. The BBP program manager may decide many of the details of this training, but the following elements are mandatory for any training program:

- the nature of BBPs like HIV and hepatitis B;
- symptoms of bloodborne disease and alternate routes of transmission (other body fluids);
- job tasks that may involve exposure;
- controls that are used to limit exposure, including work practices;
- explanations of PPE for each job classification;
- procedures to follow if a contact incident or exposure does occur;
- an explanation of signs, labels, and color codes used at the facility;
- post-exposure procedures.

Keeping accurate records of employee training is the final crucial part of a general BBP plan. Key information includes the dates and location of training; an outline and samples of material covered during training; names and qualifications of persons who conducted the training; names, job titles, signatures, and test scores (if any) of each person undergoing training.

The BBP Plan at Fairmont State College

Fairmont State College (FSC) is a four-year undergraduate school in central West Virginia. The college offers a full range of athletic facilities to its 6,500 students, including a swimming pool, football field, soccer facilities, a weight room, two gymnasiums, a baseball field, and tennis courts. In addition, the school has a full-time student health service that is charged with treating minor injuries. It also has a full-time athletic trainer and numerous student work-study employees.

Immediately after the implementation of the BBP Standard in 1992, FSC developed its own comprehensive BBP plan. While the FSC plan is more highly detailed than the generalized plan outlined above, it is also very cost-effective. The direct program costs are confined to purchases of "sharps" containers and disposal; these costs are between $900 and $1,200 per year. Personnel training and annual program review time are estimated to be under $1,000 per year at the current maintenance level.

FSC estimates that BBP exposure costs far exceed these program costs. In fact, a single BBP exposure usually requires medical services, continued surveillance, worker compensation, insurance, time away from work, and more. There have been two reported needle-stick incidents at FSC. One incident resulted in losses totaling approximately $600 (due to paid leave, first-aid costs, and investigation costs). The other incident resulted in losses totaling approximately $14,000, which included medical, administrative, and worker's compensation costs in addition to the above expenses. Nevertheless, the authors conclude that their program is cost-effective in containing BBP-associated expenses, not to mention the potential suffering of personnel and family.

Summary

Deciding whether or not to implement a BBP plan is no longer an option at athletic facilities and schools if exposures to bodily fluids are possible for workers or patrons. OSHA has clearly defined the necessary plan in the Code of Federal Regulations, as outlined here. Implementing a plan is not particularly intrusive, and the procedures become rather commonplace after a while. Finally, the fact that a BBP plan can and does save money and lives should be reason enough to implement one.

References

Centers for Disease Control and Prevention. (1999). www.cdc.gov [On-line].

National Collegiate Athletic Association. (1999). NCAA guideline 2-H: Bloodborne pathogens and intercollegiate athletics. In T. Halprin (Ed.), *The NCAA sports medicine handbook* (12th ed.). Indianapolis, IN: Author.

Occupational Safety and Health Administration. (1991). Bloodborne pathogens standard 1910.1030. *Federal Register, 56*(235), 64175-64182.

Skaros, S. (1998). Hepatitis B—Are you really immune? *The Journal of Physical Education, Recreation & Dance, 69*(1), 55-58.

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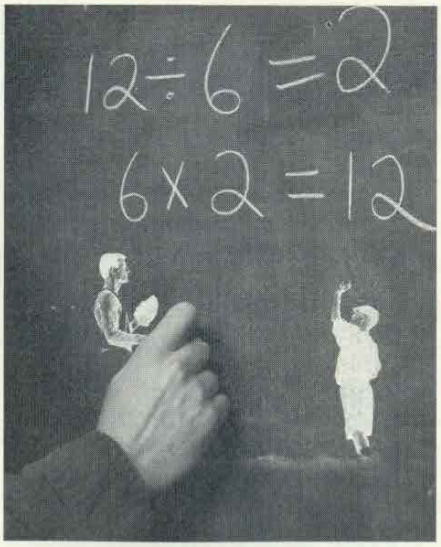

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