

KENTUCKY SPORTS SAFETY WORK GROUP

HB383 REPORT

OCTOBER 22, 2009

Introduction

On March 24, 2009, Governor Steve Beshear signed House Bill 383 (2009 Regular Session). The Sports Safety Work Group (SSWG) was established as a result of this legislation. The bill also contained an emergency provision, meaning that the law went into effect immediately, and included two major components:

- 1) Kentucky High School Athletic Association, with assistance from the Kentucky Department of Education, shall staff and coordinate a study of sports safety to be completed no later than October 1, 2009.
- 2) The Kentucky Board of Education or organization or agency designated by the board to manage interscholastic athletics shall require each high school coach to complete a sports safety course consisting of training on how to prevent common injuries. The course shall also be focused on safety education and shall not include coaching principles.

Twenty-two members of the education and athletics professions were selected to serve on the work group, satisfying the following requirements spelled out in House Bill 383:

- a) At least two (2) members of the Kentucky Board of Education, selected by the board chairman;
- b) At least two (2) representatives from the Kentucky Department of Education, selected by the commissioner of education;
- c) At least two (2) high school coaches selected by the chair of the Board of Control;
- d) At least two (2) members from the KMA, appointed by the executive director;
- e) At least three (3) certified sports trainers (refer to definitions of Athletic Trainer in report); and
- f) Others as deemed appropriate by the commissioner of education and the executive director of the Kentucky High School Athletics Association.

Kentucky High School Athletic Association Commissioner Brigid DeVries and Kentucky Department of Education liaison Michael Dailey created and assembled the following work group to ensure that all groups listed in the bill were represented.

- a) Dorie Combs, Doug Hubbard and Austin Moss, members of the Kentucky Board of Education;
- b) Brigette Combs Stacy, Michael Dailey and Darryl Thompson of the Kentucky Department of Education;
- c) Mark Peach, Head Football Coach at Anderson County High School and Sara Raakers, Head Soccer Coach at Notre Dame Academy;
- d) Dr. James "Pete" Bowles, Dr. Philip Hurley, Dr. Ben Kibler and Dr. Michael Miller, members of the Kentucky Medical Association and the KMA Committee on the Medical Aspect of Sports;

- e) Bob Barton, PhD, Sheri McNew, Greg Rose and Tom Steltenkamp, Certified Athletic Trainers and members of the Kentucky Athletic Trainers Society;
- f) Brigid DeVries, KHSAA Commissioner; David Weedman, 2009-10 President of the KHSAA Board of Control; Dale Brown, Superintendent of Warren County Schools; Lonnie Burgett, Superintendent of Mayfield Independent Schools; Lea Wise Prewitt, Member of the KHSAA Board of Control and parent of three high school student-athletes; Jerry Wyman, Director of Athletics and Activities for the Jefferson County Public Schools.

To complete its work, the SSWG drew from the expertise of its members and created sub-committees assigning each of them the task of researching specific areas of sport safety. In addition to the Committee members' professional and personal knowledge and experience, members were provided information from other states high school athletic and activity associations; collegiate and professional sports safety standards and plans; injury information and position statements from the National Federation of High Schools; and presentations from experts recognized as leaders in their field of study. Beginning in May, the SSWG held seven meetings at the KHSAA offices in Lexington to discuss ideas as a group and to report on and present findings from established subcommittees and outside presenters. These meetings were open to and often attended by members of the general public. Summaries of the information reviewed are included in Appendix B.

Committee members were advised from the beginning that the objective of the SSWG was to make an assessment of the current state of high school athletics with respect to sports safety in Kentucky and suggest what could be done to maintain and improve safety for student-athletes of all ages. As the group continued to meet, several common themes emerged, including:

- Coaches at all levels (freshmen, junior varsity or varsity), head and assistant, paid or unpaid, need to be trained in basic life-saving and sports safety skills. It was stated that in no way are these skills meant to serve as a substitute for qualified, licensed medical professionals, but rather to teach the coaches how to respond to emergency medical situations.
- Parties involved in training, or administering training need to utilize existing educational resources or create new ones, if necessary, to educate coaches and student-athletes about safety including heat related illness, supplement use, proper nutrition and weight training,
- There must be support for a philosophical shift from the current sports medicine principles which tend to be reactive, to a more proactive approach with emphasis on preventative measures,
- A need exists for there to be education of and support for, uniform sports safety standards for coaches and student-athletes in Kentucky's middle schools in addition to high schools which should apply to certain non-athletics based activities, and
- The most effective treatment is rendered in an emergency situation at the point of injury. An education program that teaches skills to be used in an emergency situation is most effective when it is taught during a situation where the skills can be practiced. Treatment and skill instruction can be effectively delivered by Certified Athletic Trainers.

CURRENT KHSAA REQUIREMENTS

The SSWG examined the existing coaching education requirements in place within KHSAA regulations as detailed in Bylaw 27 and empowered by regulation in 702 KAR 7:065. In addition, the SSWG reviewed the content of the new, mandatory KHSAA Sports Safety Course and considered the best way to communicate this type of information in the future.

According to Bylaw 27, all coaches of a high school sport in Kentucky, a person must complete:

- A certified first aid course that includes training in the use of Automatic External Defibrillator (AED),
- A certified coaching education program (beginning in 2009, the National Federation of High Schools course; before 2009, the American Coaching Education Program course),
- The newly implemented KHSAA Sports Safety Course every two years.

According to Bylaw 27, a head coach of a high school sport in Kentucky, a person must complete:

- A Medical Symposium for head coaches at least once every two years, and;
- A sports specific rules clinic for head coaches each year.

The SSWG addressed the following areas in this report as stated by the language of House Bill 383:

- a) The requirements and their adequacy for sports safety education in public middle and secondary schools, including heat-related and air quality issues, chronic and overuse injuries, and other risk factors,
- b) Required training programs for secondary school coaches, to include how training is certified to demonstrate knowledge and competencies of participants,
- c) Required first aid and medical assistance protocols or standards of care for students suffering minor and major injuries during practices and competitions,
- d) Data regarding sports injuries, by sport, in Kentucky and an examination of data reporting requirements and responsibilities during practices and competitions,
- e) Education for high school coaches, volunteers, parents, and student athletes relating to nutrition, weight training, and the dangers of steroids and other illegal supplements,
- f) The availability of sports injury prevention programs and other safety resources, and
- g) Other information as deemed appropriate by the study group to fully examine the status of sports safety in Kentucky for high school students.

DEFINITIONS AND OPERATIVE TERMS

Initially, the SSWG needed to establish common language and terminology. The SSWG represented various professional occupations, and therefore the use of specific terms needed to be consistent prior to any recommendations from the SSWG. The following "Definitions" were the result of this effort to establish common language.

Organizational References: The report includes references to the following organizations and entities:

- a) Kentucky Medical Association (KMA),
- b) Kentucky Athletic Trainers Society (KATS),
- c) Kentucky Board of Medical Licensure (KBML),
- d) Kentucky Board of Education (KBA),
- e) Kentucky Department of Education (KDE), and
- f) Kentucky High School Athletic Association (KHSAA).

Coach: Definitions (From KHSAA Bylaw 27 as incorporated into 702 KAR 7:065)

- a) Level 1- A coach could be an individual that is a certified teacher and member of the regular school system faculty, or
- b) Level 2- A coach could be a member of the community that either 1) works inside the school system but does not hold a teaching certificate, or 2) works outside the school system but is recognized by the school system as a coach and meets all other requirements to be a coach as defined in KHSAA Bylaw 27.

Qualified Medical Professionals: Athletic Trainers, certified to practice athletic training by the KBML; Registered Nurses, Physicians, or Physicians Assistants licensed to Practice in Kentucky as enumerated in HB383.

Practice: ... "To exercise or perform repeatedly in order to acquire or improve a skill", and includes:

- a) Scheduled practice per KHSAA Bylaw 25
- b) Other activities to include:
 - Open gym/field/facility,
 - Pre-season conditioning,
 - Tryouts,
 - Private (but required) lessons, i.e. Gymnastics for Cheer,
 - Scrimmages, and
 - Weight Training

Competition: ... "a contest or similar test of skill or ability"

- a) Regular season game/contest/meet/match,

- b) Tournaments (regular season),
- c) Out of State contests/tournaments,
- d) Post Season Tournaments/meets/matches, and
- e) Individual Contests.

High School: Students enrolled in grades 9-12. "High school" means any Kentucky public high school, the Gatton Academy and Mathematics and Science in Kentucky, and any private, parochial, or church school located in Kentucky that has been certified by the Kentucky Board of Education as voluntarily complying with curriculum, certification, and textbook standards established by the Kentucky Board of Education under KRS 156.160 (from 164.7874 §11)

Middle School: Students enrolled in graded 5-8. "Middle school" means grades five (5) through eight (8), regardless of school or district configuration (from 156.551 §3);

Secondary School: Students enrolled in grades 7-12. "Secondary school" means a school consisting of grades seven (7) through twelve (12), or any appropriate combination of grades within this range as determined by the plan of organization for schools authorized by the district board. When grades seven (7) through nine (9) or ten (10) are organized separately as a junior high school, or grades ten (10) through twelve (12) are organized separately as a senior high school and are conducted in separate school plant facilities, each shall be considered a separate secondary school for the purposes of KRS 157.310 to 157.440 (from 157.320 §11).

Athletic Trainer: Means a person with specific qualifications, as set forth in KRS 311.900 to 311.928 who is certified to practice athletic training and who, upon the supervision of a physician licensed under KRS Chapter 311, carries out the practice of preventing, recognizing, evaluating, managing, disposing, treating, reconditioning, or rehabilitating athletic injuries. In carrying out these functions, the Certified Athletic Trainer may use physical modalities, such as heat, light, sound, cold, or electricity, or mechanical devices. A Certified Athletic Trainer shall practice only in those areas in which he or she is competent by reason of his or her training or experience

- a) Certified Athletic Trainer – An individual who is certified to practice athletic training by the Kentucky Board of Medical Licensure and who, upon the supervision of a physician licensed in Kentucky carries out the practice of preventing, recognizing, evaluating, managing, disposing, treating, reconditioning, or rehabilitating athletic injuries, and
- b) Student Athletic Trainer – A college student studying to be an Certified Athletic Trainer who is under the direct supervision of a Certified Athletic Trainer.

Approved Sports Safety Course: The Sports Safety Course developed in the summer of 2009 with content included by representatives of KMA and KATS, and administered and delivered by the KHSAA to meet the requirements of House Bill 383, and available to all schools in Kentucky, the general public, and all other affiliated groups that desire its use.

The SSWG reviewed each study component outlined in Section 1 of HB 383.

HB 383 SECTION 1 (a)

The study shall include a review of:

- a) The requirements and their adequacy for sports safety education in public middle and secondary schools, including heat-related and air quality issues, chronic and overuse injuries, and other risk factors.*

The SSWG collected and examined data related to sports safety education, including the existing coaching education requirements outlined in KHSAA Bylaw 27. While the SSWG was asked to address aspects of high school sports safety, the group recognized that the process of collecting and analyzing data to guide safety education courses and reach valid conclusions would be time consuming and costly. In addition, the SSWG concluded that the proper collection and analysis would require fully funded legislative or regulatory amendments. The committee concluded that specific action should be taken regarding items such as required training programs for secondary school coaches or the inclusion of certification in order to demonstrate knowledge.

The SSWG also concluded that the requirements for sports safety education in secondary schools are more than adequate in the Commonwealth of Kentucky. Kentucky was one of the leaders in starting educational programs for high school head coaches. Examples of educational programs regarding sports safety go as far back as the early 1970s when courses were offered to coaches attending the boys' state basketball tournaments offered by the KHSAA. The KMA sponsored Sports Medicine Symposiums that are designed for coaches started in Lexington and eventually expanded throughout the state. Some of the early sports safety programs emphasized the importance of heat monitoring, and rehydration of student athletes during pre-season football practices, pre-season scrimmages, and pre-season bowl games. The Sports Medical Symposiums were used as models by other states throughout the southeast. The availability of educational information has increased consistently for many years.

However, all secondary school personnel should have these education materials, including courses and printed documents distributed or available to all coaches (head and assistant) in all sports. Not all assistant coaches and other school personnel currently embrace opportunities to take advantage of the resources available to them.

Existing sports safety requirements apply only to high school athletics as the other grades are not under the direct jurisdiction of the KHSAA. As such, there are no mandates in place for middle school coaches as there is no governing body for middle school athletics or activities. The SSWG recommends to member school systems that coaches at all levels complete the sports safety requirements in place for the high school level. The SSWG found that current requirements for coaches for sports safety education are adequate at the high school level and would be sufficient at the middle school level if coaches were required to complete the same mandates.

KMA and KATS representatives worked at a rapid pace to meet the needs of the current 2009-10 athletic seasons. The course designed for coaches that was authored by representatives of the KMA and KATS and administered and delivered by the KHSAA, more than meets the requirements of House

Bill 383. Heat related issues, chronic injuries, overuse injuries, risk factors and risk management considerations are covered effectively in the current course in addition to other subject areas.

The SSWG reviewed the parameters by which the KMA has operated its Sports Medicine Symposiums for the KHSAA for more than twenty-five years. The SSWG studied the current delivery mechanism (face to face, once every two years) and compared it to the new Sports Safety Course that allows for near-constant revision, and a convenient on-line delivery system that negates any of the geographic constraints of the coach or the school.

The SSWG reviewed the existing KHSAA Heat Index program that was the result of recommendations from KMA. At specific temperature levels, activity revision and event cessation is required. Annually, the schools must submit collected data from July 15 to September 15. The following represents the existing activity requirements under the Heat Index program:

Under 95 degrees Heat Index

- Provide ample amounts of water. This means that water should always be available and athletes should be able to take in as much water as they desire,
- Mandatory water breaks every 30 minutes for 10 minutes in duration,
- Ice-down towels for cooling, and
- Watch/monitor athletes carefully for necessary action.

95 degrees to 99 degrees Heat Index

- Provide ample amounts of water. This means that water should always be available and athletes should be able to take in as much water as they desire,
- Mandatory water breaks every 30 minutes for 10 minutes in duration,
- Ice-down towels for cooling,
- Watch/monitor athletes carefully for necessary action,
- Contact sports and activities with additional equipment,
- Helmets and other possible equipment removed if not involved in contact or necessary for safety,
- Reduce time of outside activity. Consider postponing practice to later in the day, and
- Re-check temperature and humidity every 30 minutes to monitor for increased Heat Index.

100 degrees to 104 degrees Heat Index

- Provide ample amounts of water. This means that water should always be available and athletes should be able to take in as much water as they desire,
- Mandatory water breaks every 30 minutes for 10 minutes in duration,
- Ice-down towels for cooling,
- Watch/monitor athletes carefully for necessary action,

- Alter uniform by removing items if possible,
- Allow for changes to dry t-shirts and shorts,
- Reduce time of outside activity as well as indoor activity if air conditioning is unavailable,
- Postpone practice to later in day,
- Contact sports and activities with additional equipment,
- Helmets and other possible equipment removed if not involved in contact or necessary for safety. If necessary for safety, suspend activity, and
- Re-check temperature and humidity every 30 minutes to monitor for increased Heat Index.

Above 104 degrees Heat Index

- Stop all outside activity in practice and/or play, and stop all inside activity if air conditioning is unavailable.

Soon after the SSWG began to meet, the Kentucky Medical Association released its *Recommendations for Cooling Due to Heat Related Illness*. According to this newly formulated protocol, it is essential for school officials to:

- Establish a written plan for emergency treatment of Exertional Heat Stroke, and conduct drills in the implementation of the plan,
- Know how to assess environmental conditions and determine when extreme conditions exist,
- Identify a spot at the athletic facility that has shade,
- Have immediate access to ice and bags to contain ice,
- Have access to water, and provide water breaks as outlined in the KMA/KHSAA Heat Illness and Prevention Policy, and
- Know the most effective sites for application of ice to the body

The KMA recommendations also noted that it is “highly desirable” that the school and school officials, during extreme environmental conditions, obtain a tub or pool, fill it with water and ice before a practice or game, be able to use it for body immersion for maximal cooling, and have personnel trained in this technique.

It was noted by the SSWG that the KHSAA amended the language of Bylaw 27, effective for the 2009-10 school year, to strengthen the first aid requirement of coaches for KHSAA-sanctioned sports. In addition to maintaining CPR certification, the content must now include instruction on how to use an automated external defibrillator (AED).

The SSWG heard a presentation from David Bensema, MD describing a new body temperature alert patch manufactured by iDOT®. The patch warns the user if they are getting close to overheating. The patch uses Thermo-Chromatic paint that changes color once a temperature threshold is met, in this instance a 100.5 degree internal body temperature. The patch is placed on the wrist or the neck of the competitor and is normally black in color. If the person’s temperature reaches this unhealthy level, the patch turns yellow and can be easily seen from up to 60 meters away. Dr. Bensema stated the patch

was used on an experimental basis by the Cincinnati Bengals, Pittsburgh Steelers and University of Kentucky during summer football training camps. Currently, the cost of each patch is 25 to 33 cents each, with discounts for bulk purchases. The product has been approved by the Food and Drug Administration and is awaiting a patent. Research is ongoing on this product.

The SSWG has exceeded the mandates of H.B. 383 in considering possible improvements to the safety of athletes in Kentucky's schools. Numerous presentations were reviewed covering such subjects as concussions, injections and other on-site procedures in the athletic environment, use of I.V. preparations at game sites, heat monitoring devices, and safety conscious clothing and sports equipment. The members of the SSWG received "cutting edge" information from many of the experts in sports medicine fields.

Air quality issues have been addressed by several authorities in the environmental health arena. The SSWG studied air quality information as it relates to communities in Kentucky. Mr. Tom Fitzgerald, an expert on the subject, attended the Aug. 10, 2009, SSWG meeting and had supplied written information at previous meetings. Mr. Fitzgerald discussed many of his findings and included ways to minimize athlete risk due to poor air quality. The SSWG found that credible evidence exists illustrating the effect of Air Quality on respiratory health. Poor Air Quality Index readings (100 and above) begin to have a detrimental effect on members of the population with respiratory problems. That risk escalates with higher readings. Since ambient air quality is currently only monitored in seven areas in Kentucky (Louisville, Lexington, Ashland, Owensboro, Pikeville, Bowling Green and Paducah), there are many areas of the state that are not affected by these air quality measurements. Coaches and administrators in the affected areas should be aware of conditions and take precautions to protect student-athletes on poor air quality days, including altering practice routines to reduce endurance-based activity.

CONSENSUS OF THE SSWG

1) Air Quality Index information needs to be available to coaches and administrators in pre-determined areas of the state.

The SSWG recommends that the KHSAA take the following action regarding air quality:

- **Work with the Environmental Protection Cabinet to identify areas of the state and specific KHSAA member schools affected by the Ambient Air Quality warnings and information,**
- **Distribute a model plan to member schools for dealing with ambient air quality alerts, and**
- **Work with the Environmental Protection Cabinet to study the feasibility of integrating its data into the KHSAA website with notification mechanisms.**

HB 383 SECTION 1 (b)

The study shall include a review of:

- b) Required Training Programs for secondary school coaches, to include how training is certified to demonstrate knowledge and competencies of participants*

The committee collected and examined data from several sports safety courses that are currently on the market, as well as courses that were developed with specific states in mind. Among the courses reviewed were the American Sport Education Program (ASEP), the American Red Cross, the Alabama Sports Foundation, and the Ohio Department of Education.

A report issued by Dr. Bob Barton, on behalf of a subcommittee established by the SSWG, noted that, while each course had positive aspects, each also had issues that made tailoring the course to the requirements of H.B. 383 difficult. The Sport First Aid course offered by ASEP is extremely detailed in its instruction; however, certification of instructors to meet the language of HB 383 could prove expensive and difficult. To date, there is only one instructor who is both approved by ASEP and licensed to practice in Kentucky. It was noted that H.B. 383 included a stipulation that for approval of a course, it must be taught by qualified professionals who shall either be licensed athletic trainers, registered nurses, physicians or physician's assistants licensed to practice in Kentucky.

According to Dr. Barton's report, the course offered by the American Red Cross is "a good program, but has little if any flexibility to the content and adaptations for a specific group." There are more instructors for this course that are licensed to practice in Kentucky, though they have expressed great concern about possible loss of Red Cross certification if they tailor the course to meet the requirements of HB383, due to the rigidity of the requirements within this course.

The review of the National Sports Foundation (Alabama) course also encountered the issue of certified instructors. Four Certified Athletic Trainers have done most of the instruction in this course; however, none are licensed to practice in Kentucky. Representatives of the National Sports Foundation, as well as Kentucky Head Football Coach Rich Brooks made a presentation to the General Assembly, though at the time the issue of instructor licensure was not addressed. According to the sub-committee report, "Meetings have been held involving the Foundation and the Presidents of KATS, and the National Athletic Trainer's Association. The Foundation remains optimistic that they can meet the requirements of the Kentucky law, however no solution to the instructor question has been presented."

The Ohio Department of Education offers a course that is required for Ohio coaches. Apparently, there are several Ohio instructors that could be licensed to teach this course and tailor it to the needs of any state.

The SSWG also concluded that many of the reviewed programs did not sufficiently address heat illness and injury prevention. In addition, it is doubtful that enough instructors could be trained to meet the needs of every coach that must complete a course without significant capital outlay. There is also the issue of cost to school districts as these courses typically ranged from \$40 - \$120 per person.

The SSWG concluded the best solution was to work with the existing framework of the Sports Safety Course so that it could be tailored to the needs of Kentucky coaches. This course was developed

initially in 2009 by the KMA and KATS representatives and implemented by KHSAA, and included the content requirements outlined in Section 2 of HB 383:

- Emergency Planning,
- Heat and Cold Illness,
- Emergency recognition,
- Head Injuries,
- Neck Injuries,
- Facial Injuries, and
- Principles of First Aid

Every instructor in the Sports Safety Course that was offered to coaches and administrators online through the KHSAA website is licensed by the KBML as either a Medical Doctor or a Certified Athletic Trainer. The physicians and Certified Athletic Trainers offered their services without charge and the development and maintenance of a delivery and tracking system was done by the KHSAA at no charge to the member schools. This allowed each of Kentucky's school districts to meet the requirement of HB 383 by taking the course at no charge. The Sports Safety Course addresses the mandates of H.B. 383 and therefore meets the exacting specifications within the bill. It was the only course found that meets all of the HB383 requirements. The SSWG concluded that a course developed and taught by Kentucky physicians and athletic trainers who understand the sports safety conditions unique to Kentucky athletes, would be optimal. The course can continue to focus on Kentucky issues and allow for greater flexibility to update content and make changes if needed. To date, more than 7,500 coaches have completed the current Sports Safety Course. Estimates are as high as 12,000 who need to complete the course before the winter and spring sports seasons end during the 2009-10 school year. It has been estimated that this has saved Kentucky schools a minimum of \$300,000 that would have been paid to other courses that did not meet HB383 requirements.

CONSENSUS OF THE SSWG

- 2) The Sports Safety Course developed by the KMA with assistance from KATS should continue to be used to fulfill the mandatory sports safety requirement for coaches as detailed in KHSAA Bylaw 27 and H.B. 383. Updates in the curriculum can be made at intervals not to exceed thirty (30) months with coaches being required to attend the course not less than every twenty-four (24) months. In addition, as the need presents itself based on verifiable data or health trends, additional modules can be added to the course.**
- 3) The KMA and KATS should review the Sports Safety Course; revise, update and expand the curriculum; and integrate the curriculum with the KMA Annual Medical Symposiums. The KMA could take this information and continue to work closely with the KHSAA to evaluate the existing Symposiums including the periodic review of the core content and delivery systems and consolidation of coaching requirements.**

HB 383 SECTION 1 (c)

The study shall include a review of:

- c) Required first aid and medical assistance protocols or standards of care for students suffering minor and major injuries during practices or competitions*

With the increase in athletic participation at all levels in recent years, there is a corresponding increase in the likelihood that medical emergencies will occur. The SSWG found that the North Carolina High School Athletic Association requires its member schools to have an Emergency Preparedness Plan on file and practice the plan. It is important that all schools have a written safety plan to be used in the event of an emergency for all athletic sites. This initiative could be facilitated with cooperation from the Kentucky Center for School Safety or other related groups. Existing regulations require that each school (through the Board of Education and Site Based Decision Making Council) have an Emergency Safety Plan on file. A partnership with the Kentucky Center for School Safety could avoid a duplication of resources and allow for faster implementation and practice of this type of plan in all schools.

CONSENSUS OF THE SSWG

- 4) The KHSAA, KDE, KMA, and KATS should work collaboratively with the Kentucky Center for School Safety to develop a prototype or template of an emergency preparedness plan for athletic practices, contests and facilities. The KHSAA should distribute these materials for developing an Emergency Preparedness Plan to its member schools. These plans could be separate operational plans for athletics, or incorporated as new segments into existing school safety plans if none exist for athletics. The SSWG supports the KHSAA, KDE, KMA and KATS working collaboratively with the Kentucky Center for School Safety in routine reviews of these plans in conjunction with existing reviews of other safety issues. The SSWG recommends the development of a monitoring mechanism to assure the development of these plans.**

HB 383 SECTION 1 (d)

The study shall include a review of:

- d) Data regarding sports injuries, by sport, in Kentucky and an examination of data reporting requirements and responsibilities for oversight when injuries occur*

The committee examined extensive data gathered from national studies conducted by Dr. Fred Mueller from North Carolina and Dr. Dawn Comstock of The Ohio State University. However, the SSWG found that injury data for Kentucky is incomplete or has not been tracked.

There are many reasons for a lack of reliable data at the state level, primarily, a lack of funding for a comprehensive study to be performed. To conduct a reliable study, infrastructure mechanisms to adequately collect and analyze data must be in place, including proper training of researchers, the equipment to conduct research, and development of database to house and analyze the findings. This could be expensive and a lack of seed money has been a deterrent to this type of specific research in Kentucky. Another reason for the lack of reliable data is the reluctance of medical professionals to provide public reports of injury data due to privacy issues related to the Health Insurance Portability and Accountability Act (HIPPA) and other privacy regulations.

A third reason for the lack of information is the inconsistency in defining a sports injury. For some school personnel, a sports injury is one that requires hospitalization while for others it could be a sprained ankle. The only accurate way to record injury data is from qualified medical professionals who in advance, have defined the parameters. This remains an issue because many schools do not have access to a qualified medical professional on a daily basis.

There was considerable discussion by the SSWG about the licensure status of athletic trainers at KHSAA member schools. It is suspected that some schools are using individuals as trainers who are not licensed by KBML. The SSWG determined that the KHSAA should ask each of its member schools for the license number of each person entered as an athletic trainer on the KHSAA website to ensure that the individual is qualified to provide the needed data and response.

Currently, there is no reliable sports injury data specific to Kentucky. Dr. Eric Fuchs, an Associate professor at Eastern Kentucky University, has proposed one such study, which mirrors a similar effort in Georgia. At that time there was no firm proposal or cost estimate on such study. The SSWG heard a presentation from Jennifer McKeon, PhD, an associate professor at the University of Kentucky. McKeon detailed the findings of the Fayette County Injury Surveillance System (an athletic injury study) conducted at seven central Kentucky high schools. The study compiled injury data reported by athletic trainers for athletes that participated in football, soccer, volleyball, cross country, basketball, wrestling, baseball, softball, track and field and golf during the 2007-08 school year. Injuries were reported on a standardized injury evaluation form. The study, now in its fourth year, revealed several important findings, among them: a) injury surveillance is only possible at the high school level at high schools when athletic trainers provide 'every day coverage,' b) injury surveillance is not possible when left to be reported by coaches/athletes. Her study is attempting to determine if injury surveillance and accurate conclusions are possible at schools with an athletic trainer that comes one time per week or less, which appears to be the level of coverage at many Kentucky high schools. Further study has

been proposed, narrowing the number of sports studied, but projected costs are \$80,000 for four schools and \$20,000 for one.

CONSENSUS OF THE SSWG

- 5) The General Assembly should appropriate funds to collect sports injury information in Kentucky in order to provide accurate examples of what types of injuries and emergencies are occurring. It is imperative that this data come from qualified medical professionals. Such a study would give the KHSAA, KMA and KATS valuable data for the consideration of further rules and regulations to help make athletics safer for all involved.**
- 6) High school personnel should legally provide data to researchers whenever sports injuries occur. Regardless of the severity of injuries such as those considered minor (such as sprained joints or strained muscles), or catastrophic events (such as paralysis or death), researchers are in need of this vital information. The SSWG recommends that the KHSAA continue assisting Dr. Fred Mueller at the University of North Carolina and Dr. Dawn Comstock at Ohio State University with ongoing data collection efforts.**

HB 383 SECTION 1 (e)

The study shall include a review of:

- e) Education for high school coaches, volunteers, parents and student athletes relating to nutrition, weight training, and the dangers of steroids and other illegal supplements*

A review by an SSWG sub-committee found there are numerous resources available to districts and schools that provide guidance and information relating to nutrition, the dangers of steroids and other illegal supplements. The report stated, "These resources are seldom utilized by coaches for this purpose and until recently, preventative measures in these specific areas have been on an as-needed basis."

School and even district-wide policies prohibiting students from possessing, using, transmitting or being under the influence of drugs while on school property have been in place for years. However, these measures deal primarily with punishment if these policies are violated.

While Physical Education classes offer limited information on nutrition, supplements and weight training, much of the information may be found through other sources, including Youth Service Centers. According to the sub-committee report, "These centers sponsor prevention activities and provide research-based information for students throughout the school year. They collaborate with Title IV (Safe & Drug Free Schools), the Kentucky Agency for Substance Abuse Policy (KYASAP), the Kentucky Center for School Safety, Operation UNITE, health departments, regional prevention centers, and local DARE programs. They also support Drug-Free School Clubs and Alcohol, Tobacco and Other Drug (ATOD) prevention curriculum at the high school level. Each service center is guided by an advisory council comprised of local community members, parents, students and school staff. The Youth Service Centers could be an excellent resource for coaches."

Another resource for parents, coaches and student-athletes is the Kentucky Regional Prevention Centers (RPCs). RPCs assist individuals and groups in developing prevention programs that encourage healthy choices about alcohol, tobacco and other drugs. A total of 14 centers serve all 120 of Kentucky's counties. The sub-committee report stated, "Regional Prevention Centers would be a great resource for coaches to contact and request prevention information surrounding the dangers of steroids and other illegal supplements."

The 29-county area that comprises Southeastern Kentucky is served by Operation UNITE (Unlawful Narcotics Investigations, Treatment and Education). Its education team assists in school-wide substance abuse prevention and education activities.

The University of Kentucky College of Agriculture Cooperative Extension Service provides nutrition information through the Family and Consumer Sciences (FCS) Extension Agents. According to the sub-committee report, "Local offices currently collaborate with and support many school programs and activities in their local districts. Extension agents also serve on community councils and school committees. The local FCS Extension Agents would be an excellent resource for coaches to collaborate with for research-based resources when discussing nutrition with student-athletes, parents, and volunteers participating in their athletic programs."

The Jefferson County Public Schools produced a video for the 2009-2010 school year containing information on proper nutrition, injury prevention and treatment, as well as segments on Staph Infection and MRSA. Employees, parents and student-athletes were required to view the video. With funding and a few modifications, the SSWG concluded that this successful model could be used state-wide as a teaching tool.

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7) The KHSAA and KDE should continue to distribute and refer health and sports safety information to coaches, student-athletes, parents and volunteers. The SSWG recommends the following initiatives be undertaken:

- **The KHSAA and KDE encourage KHSAA member schools coaches to utilize existing state and local resources addressing nutrition, the dangers of steroid and supplement use, and weight training concerns with their coaches, student-athletes, parents and volunteers.**
- **The KDE utilize state and local resources to create local community sports safety work groups in each county that could assist coaches, parents and student-athletes in addressing nutrition, the dangers of steroid and supplement use, and weight training. Teams could consist of coaches, parents, volunteers and student athletes, representatives from the Family Resource Youth Service Centers, Kentucky's Regional Prevention Centers, Family and Consumer Sciences Extension Agents, Operation UNITE (where applicable), Kentucky Center for School Safety, Kentucky Agency for Substance Abuse Policy, Champions for a Drug-Free Kentucky, KMA, KHSAA, Community Education Directors, local health departments, University of Kentucky Sports Medicine, Rudy J. Ellis Sports Medicine and the Council on Postsecondary Education.**
- **The KHSAA and the KDE continue to provide contact information and links for state and local resources on their respective websites.**
- **The KHSAA and KDE utilize all available existing media resources to distribute information to coaches, volunteers, parents and student athletes.**
- **The KHSAA should continue to utilize the resources of the Kentucky Department of Public Health for common initiatives.**

HB 383 SECTION 1 (f)

The study shall include a review of:

f) The availability of sports injury prevention programs and other safety resources

The SSWG examined the sports injury prevention programs and resources available to athletes and coaches in Kentucky. A report compiled on behalf of an SSWG sub-committee by Certified Athletic Trainer Tom Steltenkamp, states that "there are numerous opportunities for citizens of Kentucky to participate in sports injury prevention programs, and related safety programs. However, many are designed for certain populations and sometimes have prerequisites for participation."

It should be noted that the American Red Cross (ARC) offers numerous safety courses that include many aspects of safety education, as well as first aid for all populations. Included are:

- ARC Standard First Aid,
- ARC Cardiopulmonary Resuscitation,
- ARC Automatic External Defibrillator,
- ARC Workplace Safety,
- ARC Water Safety / Lifeguard Training,
- ARC AIDS Safety Awareness Classes,
- ARC Instructor Training Classes,
- ARC Sports Injury First Aid, and
- ARC Aquatics (specific for swimming) Classes

There are numerous other safety courses offered regionally through the state by different entities to help with prevention and first aid. Included are:

- Ashland Schools (in conjunction with local hospitals) offer sports injury classes, as well as the athletic training student Olympics,
- Baptist Hospital Chain (including Lexington, Louisville and Nashville) holds sports medicine workshops on a regular basis,
- Cincinnati Sports Medicine offers sports medicine workshops , both in Ohio and Kentucky on a regular basis,
- Eastern Kentucky University offers a "Rescue School" weekend program annually that often includes athletic first aid,
- Emergency Medical Technician classes are offered throughout Kentucky that are an intensive study of emergency first aid and transportation procedures for all emergency occasions (many Kentucky ATCs are also EMTs),
- Heart Association (American) offers CPR and AED classes on a regular basis throughout the state,

- Lexington Clinic (and Dr. Ben Kibler) offer sports medicine workshops on an annual basis,
- Marshall University (in conjunction with Scott Orthopedics) offers sports medicine workshops on a regular basis both in Huntington WV, as well as in Boyd, Greenup County and Ashland Area,
- Morehead State University offers an athletic training education workshop for student athletic trainers on an annual basis,
- KMA offers Sports Medicine Symposiums for coaches on an annual basis,
- The University of Kentucky, and the University of Louisville offer Sports Medicine Meetings on a regular basis, attracting athletic trainers, coaches, physical and occupational therapists, nurses, paramedics, physicians, and PA s from a four or five state region,
- KATS holds an annual meeting and clinical symposium on an annual basis,
- Western Kentucky University offers an athletic training education program on an annual basis,
- Northern Kentucky University offers sports medicine programs on a regular basis, including hosting the 2010 meeting of KATS, and
- Many medical facilities that employ athletic trainers for service at area high schools, host sports medicine "in-service" programs for their employees, and local practitioners, with an interest in sports medicine, on a regular basis.

HB 383 SECTION 1 (g)

The study shall include a review of:

- g) Other information as deemed appropriate by the study group to fully examine the status of sports safety in Kentucky for high school students*

Most of the research information reviewed by the SSWG addressed points a) through f) as stated in HB 383. However, through the review process, several topics were discussed that dealt with issues not specifically addressed in the law, but no less important.

In its research, the SSWG found the information pertaining to student safety and required training programs were not only adequate for high school athletic competition, but were beneficial to more than just the high school student-athlete. Other school activities, such as band and middle school sports also train and participate outdoors and could be affected by potentially hazardous conditions. It would be desirable if sponsors of these activities were trained in the basics of sports safety, just as the high school coaches are trained under current KHSAA regulations.

The question of sports safety in middle school sports remains a challenge for school systems and athletic departments. Decisions are made at the local level as to middle school expectations and requirements for coaches. This year there was a noted tendency by school administrators within school districts to implement safety related programs such as the Sports Safety Course as soon as possible in a comprehensive manner within school districts. As was demonstrated with the original KMA Sports Medical Symposium Programs, school systems that encouraged or required middle school coaches to participate in mandatory training programs, found better acceptance from all of the sports coaches when promoted the same within the districts. As the knowledge of best practices for sports safety continues to expand, it is only logical that it be shared with middle school personnel as well as other activity groups or organizations interested in administering safe sports programs for Kentucky's youth.

As a result of the work of the SSWG, it has become increasingly obvious that having an Athletic Trainer involved with high school sports programs in Kentucky improves the prevention of injuries and care of student athletes. While it is important for coaches to receive basic medical training to recognize and stabilize medical injuries and illnesses, the prevention and treatment of sports related medical injuries and illnesses is best performed by Athletic Trainers.

Approximately one-third of schools in Kentucky have access to the services of an Athletic Trainer to provide prevention and care of injuries to their high school athletes. The major obstacle that prevents many schools from having a Athletic Trainer is the lack of resources to pay for those services. Additionally, due to financial constraints at the school level, many of the Athletic Trainers provide services to multiple schools and their effectiveness is dramatically reduced in preventing and treating athletic injuries.

The high schools that have Athletic Trainers usually have them as a result of an agreement with a local hospital, clinic or physician office where the Athletic Trainer is employed. Legislation was first passed by the Kentucky General Assembly in 1978 defining within scope of practice for a Athletic Trainer. While the Athletic Training Practices Act professionalized the position of Athletic Trainer, it limited the ability of the Athletic Trainer to bill for specific services in a clinical environment. Later, in the early 1980s, legislation was enacted that would have stipulated that each school employ an Athletic

Trainer. However, the latter act was not funded and as such, was eventually withdrawn. When faced with the decision between hiring a Athletic Trainer and hiring other teaching or classified staff, most school district administrators do not have the funding available to employ an Athletic Trainer. As the work of Athletic Trainers has evolved and expanded, many schools are now using the services of Athletic Trainers from regional clinics and colleges or universities.

The practice act that governs Athletic Trainers in Kentucky (KRS 311.900 – 311.928) restricts the ability of an Athletic Trainer to bill independently for services in the employment settings listed above. This restriction is limiting the ability of hospitals, clinics and physician offices to employ Athletic Trainers, which is the primary reason that schools do not have access to Athletic Training services. The ability of these individuals to bill independently for services has limited income potential to the point that there is a shortage of Athletic Trainers in the state. Many individuals graduating with degrees and certifications to practice as an Athletic Trainer are seeking employment in other states that do not have the restrictions of the current practice act in Kentucky. This lack of qualified individuals could limit or restrict implementation of many of the recommendations of this SSWG and potentially, the directives of the legislature.

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- 8) The KBE should review sports safety regulations and requirements for coaches at the middle school level.**
- 9) Existing KHSAA sports safety guidelines and resources should be made available and utilized by middle school personnel and non-athletic related activities such as band, dance (pep squads), and other activities.**
- 10) As part of the implementation of HB 383, the Kentucky General Assembly should consider changes to KRS 311.900 – 311.928 to remove the current restrictions limiting the work settings for Certified Athletic Trainers. Removing the restrictions would allow the Certified Athletic Trainer to work as such in any hospital, clinic or office setting approved by and under the direction of a licensed physician and bill for Athletic Training services. Creating this revenue stream would then allow the work settings listed above to reduce the cost of providing Athletic Training Services to local schools. In addition, this career opportunity would increase the pool of available trainers for Kentucky Schools.**
- 11) The Kentucky Board of Education and the General Assembly should revisit past legislation that would have placed Certified Athletic Trainers in every public high school in the state. This provision would represent the most expeditious method of providing competent point of injury care, employing the latest prevention techniques, presenting up to date information and education, and of collecting the most accurate injury data. This position would create the best environment in which the spirit and the letter of the intent of House Bill 383 could be implemented in the short and long term.**

APPENDICES

- A) Text of Bill
- B) Minutes of Meetings
- C) Review of Existing National Research on Catastrophic Injuries (University of North Carolina)
- D) Review of Existing National Research on Sports Injuries (Ohio State University)
- E) KHSAA Heat Index Guidelines
- F) Air Quality Material
- G) IDOT Reference Material
- H) Existing North Carolina Model for Emergency Planning
- I) Documents Gleaned From Research Regarding Steroids and other Supplement Education
- J) UK Sports Medicine Presentation – 2009 Annual Meeting
- K) Kentucky Revised Statutes defining middle school, high school and secondary schools