Safety Policy and Procedure in Ohio High School Basketball

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Safety Policy and Procedure in Ohio High School Basketball

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Spring, 2014

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Acknowledgments

I acknowledge God first and foremost. I also acknowledge my entire family and my girlfriend for their support. I would like to thank the coaches and the schools that participated in my research. I acknowledge and thank Dr. Rogers for being an outstanding chair and Sylvia Ellison for being an outstanding reader. I also thank the entire staff of Public Health at Wright State University for always pushing me to reach my maximum potential.
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Abstract

There are projected to be seven million high school adolescents from roughly 20,000 high schools who partake in local sports programs annually. Children and adolescents are increasingly participating in sports, and this expanding involvement brings forth issues regarding possible risks of sports-related injury (Vanderlei et al. 2013). Although the involvement in sports is proven to be advantageous for the physical and mental well-being of human beings, injury rates are a public health concern. In the United States, young athletes are responsible for more than two million injuries, 500,000 physician visits, and 30,000 hospitalizations per year (Centers for Disease Control & Prevention [CDC], 2006).

In-person interviews were conducted with two basketball coaches from different high schools in Greene County, Ohio. Permission from each high school’s administrators and the WSU IRB Board was received to ensure that proper clearance was given for the coaches to participate.

The Ohio High School Athletic Association (OHSAA) oversees all high school sports in Ohio and The National Federation of State High School Associations (NFHS) oversees OHSAA. OHSAA implements policies and procedures that all coaches/schools in Ohio must follow. The interviewed coaches showed great awareness of OHSAA’s rules and regulations. The information that the coaches provided was very similar to OHSAA’s requirements.

There are some public health implications that could benefit coaches and players on a local, state, and national level. Coaches can improve and benefit from these recommendations because there are practices such as players wearing mouth guards, ankle braces and shoes that are supportive.

Keywords: Sports injuries, High school sports injuries, Injury Prevention, OHSAA, NFHS
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There are projected to be seven million high school adolescents from roughly 20,000 high schools who partake in local sports programs annually. Children and adolescents are increasingly participating in sports, and this expanding involvement brings forth issues regarding possible risks of sports-related injury (Vanderlei et al., 2013). Although the involvement in sports is proven to be advantageous for the physical and mental well-being of human beings, injury rates are a public health concern. In the United States, young athletes are responsible for more than two million injuries, 500,000 physician visits, and 30,000 hospitalizations per year (Centers for Disease Control & Prevention [CDC], 2006). Sports are the secondary cause of concussions for people 15 to 25 years of age, following motor vehicle accidents (Marar, McIlvain, Fields, & Comstock, 2012). Many of the more serious injuries associated with sports may cause longstanding disability. The knee is the most frequently damaged joint for young athletes and an estimated 2.5 million injuries associated with sports are brought to U.S. emergency departments annually (Gage, McIlvain, Collins, Fields & Comstock, 2012). Basketball and football are the two most commonly played sports amongst American males and females. These two sports are sponsored in over 16,000 American schools (Powell, 1999). Sports injury has a significant impact on public health. The emphasis of public health is to prevent and minimize diseases, injuries and other negative health circumstances through surveillance and promotion of healthy practices, communities and environments. Public health is concerned with the health of the community or small groups rather than that of individuals, and the health of school children is of primary public health interest because it is under the purview of governmental entities. Sports injuries can affect an individual’s quality of life when prolonged, and reduce overall community health through disability. Knee injuries are a major
public health burden: 6,664,324 knee injuries were presented to U.S emergency departments between 1999 and 2008, and 1.7% of these injuries were severe enough that the individual needed hospitalization and perhaps long-lasting rehabilitation (Gage et al., 2012). The number of high school sports-related injuries that demand surgical operation has increased over the past 10 years: there were 438,336 high school sport-related injuries that required surgery from 2005 to 2010, which was double the amount reported between 1995 and 1997 seasons (Rechel, Collins, & Comstock, 2011). Such high injury rates among high school athletes raise questions and concerns regarding safety policy, procedure and practices.

The purpose of this study is to describe the safety policies, procedures, and practices of high school boys’ basketball in Greene County, Ohio. Policies and procedures are created to ensure that players have the best chance to succeed both academically and athletically. State policies and procedures that fail to be implemented can influence the prevalence of sport injuries. The coaches on staff at schools play a primary role in ensuring that policies and procedures are implemented so their athletes have the best chance to perform well and safely. This study is important because it could enhance awareness and safety practices which may help coaches prevent future injuries from occurring.

Literature Review

The Complex Nature of Sports Injury Study

Injuries in sports are usually not due to one contributing factor but are related to numerous risk components interrelating at a specified period. For example, basketball is a sport of continuous movement and there is no required protective equipment worn. Style of play can also contribute to the types of injuries a basketball player may acquire (Vanderlei et al., 2013). For instance, a point guard is in charge of transition plays, using speed and agility to get the team
set in offence or defense. Owing to the intensity of the point guard position, he/she is more likely to contract a sprained ankle; a center would be more likely to contract a facial injury because of using force to try to get in position to get rebounds (Vanderlei et al., 2013).

The dynamic nature of basketball can be very stressful on the joints of the athletes. The most prevalent diagnosis of sport-related injuries are sprains and strains, which are also the most common among sports-related injuries treated in U.S. emergency departments. These diagnoses are correlated with physical movements such as jumping and landing (Gage et al., 2012) which are highly prevalent in a sport such as basketball. Continuous practice of basketball requires recurring motor movements and excessive joint load, which enhances the chances of injury. Those types of injuries are repetitive stress injuries (Vanderlei et al., 2013).

The current statistics concerning the epidemiology of high school injuries related to sports indicate that particular injury patterns occur in specific sports. Every sport possesses its distinguishing injury profile and level of risk, and injury rates vary across sports. For example, knee and ankle or foot injuries are more frequently experienced by individuals who play basketball verses those playing other team sports.

**Sports Injury Surveillance**

The National Athletic Injury/Illness Reporting System (NAIRS) was established in 1974. It was created from many workshops at which athletic trainers, physicians, and sports administrators shared strategies on how to obtain meaningful data. This injury surveillance system has numerous sites and many levels. NAIRS operated through a group observational design to document the types of injuries related to particular sports played in American high schools and colleges. NAIS’ assets comprised a multidisciplinary strategy team, day-to-day records of injuries and contacts, coherent data forms, precise descriptions of injuries reported,
and a data recorder that is an NATA qualified athletic trainer. The rudimentary blueprint of the NAIRS was integrated in the expansion of the injury surveillance systems in the National Football League, the National Hockey League, and the National Collegiate Athletic Association, in addition to the National Athletic Trainers’ Association (NATA) project that took place in the mid-1980’s (Powell, 1999).

The NAIRS documents identified certain risk factors that influence the injury patterns in particular sports. For instance, the action and position of a player at the moment of injury in college level football is correlated with the probability of injuries to the knee and concussions. In male high school basketball, players that play the center position have a higher probability of having anterior knee pain (26%), than players who played forward (12%) and guards (20%). There was also a significantly higher ankle sprain rate for players playing offense in comparison to playing defense (2.1 times higher) (Cumps, Verhagen, & Meeusem, 2007). The NAIRS data indicate that injuries taking place in practice are more numerous than those taking place in games. However, the severity of the injury for all sports is proven to be seven to ten times greater when occurring in games compared to practice (Powell, 1999).

In 1985 NATA authorized a study of the incidence rate, severity, and mode of injuries related with designated high school sports. The analysis included males who played high school football, male and female basketball players and wrestling participants in 150 high schools for three years. Throughout the study, 23,566 reportable injuries took place and an average of 6,000 student athletes were injured at least once yearly. Football had the highest player rate per 100 players, injury case rate per 100 players, and injury case rate per 1,000 athlete exposures. Ankle/foot injuries were highest in boys’ basketball. Boys had a higher ankle/foot injury rate (39.3%) than girls (36.4%). The risk of injury varied according to whether the player was
competing in a practice or in a game, and the risk was higher in practice. The NATA investigation results were integrated into the policy and procedure of the contemporary NATA injury surveillance (Powell, 1999).

There are also questions regarding quality of performance, injury resistance and their predictability according to quality of movement and fitness scores such as the National Basketball Association (NBA) combine when they take measure of the players speed, strength and agility (McGill, Andersen, & Horne, 2012). Of the tests performed, athletes who displayed better agility enhanced quality of performance (games and minutes played, points scored, rebounds, assist, steals and blocks) (McGill et al., 2012). When quality of movement was measured, a stiffer torso and more mobile hips were linked to better performance. However, no injury pattern occurred that would relate those measured physical factors to specific injuries (McGill et al., 2012).

**Individual Injury Prevention**

Prophylactic ankle bracing has proven to be an effective way to reduce the occurrence of ankle injuries in young athletes (Farwell et al., 2013). However, injuries between the mouth and jaw account for one third to one half of all sports injuries, and 34% of basketball related injuries occur in the stomatognathic system (Lesic et al., 2011).

Every sport engenders a distinctive pattern of injury according to environmental aspects (Powell, 1999). Factors at work include the position of the player, action during the period of injury, playing ground, protective gear and policy/procedure concerning injury prevention. A significant challenge for people in sports medicine is the task of distinguishing the influence of variables across and within each sport. The goal is to minimize sports injury rates by using preventative intermediation elaborated through evidence-based science. Such work depends on
gathering precise data of incidence, exposure, risk, and protective factors. Certain physical exercises may be a way to prevent basketball related injuries. Running exercises that force athletes to achieve appropriate knee control and stability under difficult conditions when landing and cutting have been shown to enhance hamstring strength which prevents anterior cruciate ligament (ACL) injuries (Longo et al., 2012). A recent study showed that the majority of ACL injuries in athletes occurred while no person to person contact was made and instead injury was triggered by either a sudden deceleration, switch in direction, or from landing from a jump (Paszkewicz, Webb, Waters, McCarty, & Van Lunen, 2012).

**Prevention Policy**

**National policies.**

Each U.S. state possesses an individual association that regulates its interscholastic athletic competition. The National Federation of State High School Associations (NFHS) based in Indianapolis, Indiana serves each of the nation’s individual high school state athletic associations (see http://www.nfhslearn.com/). They publish playing rules in 16 sports along with program initiatives for boys’ and girls’ high school athletic competition. The NFHS develops and provides the preventative rules and policies that are adopted by every individual state’s athletic association.

**Ohio policies.**

This study concentrates on the Ohio High School Athletic Association (OHSAA) because the study was implemented in Ohio. OHSAA’s mission statement addresses issues of safety to regulate and administer interscholastic athletic competition. “The OHSAA represents its member schools by recognizing and promoting academics, the safety of student athletes, good citizenship and lifelong values as the foundation of interscholastic athletics” (Ohio High school
Athletic Association [OHSAA].n.d.). Policy and procedures are implemented from this association and all coaches and students in Ohio’s public and private schools must abide by them. Every individual participating in the conduct of interscholastic competition is responsible for making sure the student is physically capable of safely practicing or competing. There are many rules, regulations and protocols that must be followed for the safety of the student-athletes. However, thanks to recent public health community recognition of the danger of repetitive concussion, OHSAA has now put a large focus on concussion-related injuries. There is a concussion management protocol that must be followed. In January 2011 the OHSAA board of directors adopted an athletics regulation which implemented the NFHS playing rules for concussion detection and management. On April 26, 2013 Ohio’s General Assembly on concussion and head injury in interscholastic athletics became active. OHSAA states that all student-athletes must be removed from practice or game by either a coach or official if he/she shows any signs of a concussion or head injury (Figure 1). There is also a “return to play” protocol where the students condition is assessed by a physician or other licensed medical provider. The provider must provide written authorization giving the student athlete clearance to play. All coaches (paid or volunteer) must have an up-to-date Department of Education-issued Pupil Activity Program/Coaching Permit. This permit is issued after the coach completed a no-cost, on-line concussion education course called Approved Online Concussion Education Course in Sports (National Federation of State High School Associations [NFHS], 2014). This training certification is valid for three years. Referees must complete the same course and hold the same permit. Parents and students are required to review and sign a “concussion information sheet” developed by the Ohio Department of Health before each sport season (Appendix 3). The
concussion sheet information sheet is required for the purpose of freeing the school and staff from reliability and also for awareness and general precautions regarding head-related injuries.

This OHSAA ruling now reads “Any student, while practicing for or competing in an interscholastic contest, who exhibits signs, symptoms or behaviors consistent with having sustained a concussion or head injury (such as loss of consciousness, headache, dizziness, confusion or balance problems) shall be immediately removed from the practice or contest by either of the following: 
1) The individual who is serving as the student’s coach during that practice or competition.
2) An individual who is serving as a contest official or referee during that practice or competition.”

(OHSAA, 2013, p. 1)

Figure 1. OHSAA’s rules regarding student athlete concussion.

Student-athletes are required to complete a medical sports physical examination to determine if he/she is healthy enough to participate in competitive physical activity. Sports physicals must be completed by a licensed physician prior to the athletic season (OHSAA, 2013). The completed physical form is kept on file at the high school that the student-athlete is attending.

OHSAA also has communicable disease procedures and H1N1 influenza policies. The Ohio Department of Health leaves the decision of whether or not to close down a school due to an extreme flu outbreak to the local health authorities in Ohio. If a school closing does occur during tournament time, OHSAA, in conjunction with the District Tournament Boards, reschedules the contest (OHSSA 2013).

*Greene County, Ohio.*

The preventative rules and regulations do not differ from county to county. All counties follow the same regulations provided by the state of Ohio: this includes Greene County where this study was conducted.
Methods

I conducted an in-person interview with two basketball coaches that coached at different high schools in Greene County, Ohio. I received permission from each high school’s administrators to ensure that proper administrative clearance was given for the coaches to participate. The study was deemed exempt by the Wright State University Institutional Review Board (IRB) because it collected no personal information about the participants and did not meet the definition of human subject’s research (Wright State University, n.d.) (see Appendix 1).

A literature review was completed to identify the most common injuries in high school basketball, and the coaches were asked about procedures and policies regarding the prevention of those common injuries. Different factors were explored such as playing field, equipment, and contact, as well as the balance of health and the sport. The questions were asked as part of a semi-structured interview that allowed follow up and refining questions regarding information imparted in answer to the written questions (see Appendix 2).

Participating coaches were allowed to skip any questions they chose to not answer and could terminate the interview at any time.

Results

Each question of the survey is reproduced below, followed by a summary of the answers provided by the participants.

1. A. What is done prior to playing season to ensure the lowest risk of injury for student athletes?

B. Are there restrictions on coach/athlete contact year-around?

C. How opportunities to train are created? Are the coaches allowed to be involved in summer leagues, camps, and weight lifting in the off-season?
D. What authorities oversee such activities?

Answer: Coach 1 said that they had a lifting and conditioning program for the kids that get them ready, and procedures put into place for them to be prepared for basketball season.

Both coaches also said that coach-athlete contact restriction does exist and has been adjusted in the recent fall. Four weeks after last game begins a no-contact time period, along with four weeks prior to Labor Day. They both also mentioned that there are a limited amount of days over the summer for coach player contact: 10 days of instruction drills toward basketball. Both coaches also said they are allowed to train in terms of weightlifting and strength training and are allowed to have four players at a time to give unlimited basketball instruction. However, Coach 2 expressed that even though OHSAA oversees the rules and regulations, people could break the rules because it is a self-monitoring system.

Coach 1 stated that coaches have specific responsibilities such as weight lifting coach, training coach. Coach 1 also said that they had schedules passed out at beginning of season; three two-month programs: One preseason, after spring break, and after school for June and July and that meetings and websites are used to give out information. Coach 2 expressed that because it was his first year there, they had a few open gyms, and not a lot of weight training. Coach 2 also expressed that one of the advantages of a smaller school is that the majority of student-athletes play multiple sports year-around so they stay fit.

2. A. What state policy and procedures exist for high school athletics?

B. What training do you receive about these?
Answer: Coach 1 expressed that they need coaching certification and that everybody sitting on their bench must be board certified by OHSAA. He also said that the paid coaching staff oversees all training for themselves, subordinates and unpaid staff/students. Coach 2 went into further detail regarding student eligibility expressing that there are grade restrictions; for the state of Ohio, you have to have passing grades in at least five classes to play. A maximum amount of classes that a student athlete can take was not specified in the student handbook. He also said that if a student has between a 1.5 and 2.0 grade point average (GPA), the student can play on academic probation; anyone with a GPA under 1.5 is considered ineligible and will not be allowed to play in games nor practice.

Coach 2 said that they had to be certified by OHSAA and that there are a variety of classes coaches must take and complete including concussion training class, cardiovascular pulmonary resuscitation (CPR) class, and a OHSAA rules and regulations class. Some are mandated by the state and some are federal, mandated through the NFHS. Both coaches said that OHSAA requires that all student athletes must undergo a pre-season physical. Coaches must be cleared through a Federal Bureau of Investigation (FBI) background check yearly.

3. A. Do you have certified athletic trainers on site during play? If so why?

B. Do you choose to have them on site or are you instructed to?

C. What are the credentials they have to possess?

Answer: Coach 1 expressed that the team has a licensed athletic trainer. He said that they had two that work for the school, one a teacher and one hired from a local hospital. He also said that one oversees girls’ basketball and the other oversees boys’ basketball.
He said that they may not be present throughout every practice, but usually are there at start and end of every practice and also throughout every home game. He said that it falls under one of their high school’s policy’s that home team provides for trainer.

Coach 2 expressed a very different situation. He said that he wasn’t sure because he not had any games yet. He expressed that they were not present at their practice. He thought that coaches having to be required to have CPR and AED certification should be able to take care of the majority of problems that arise for small injuries. He expressed that if a severe situation occurred, he would call the ambulance, or some type of assistance.

4. A. Do you make sure students drink enough water during practice and games?

B. What standards are used for hydration?

Answer: Coach 1 stated that they provide many water breaks throughout games and practice. However, he said that the amount of water that the amount of water that each student athlete drinks is their own responsibility. There is no weigh in or weigh out to measure hydration, but they ensure that there are several opportunities to get water and encourage frequent intake. Coach 2 seemed to put more importance on days leading up to the contest. He stated that they always reiterate on the fact that hydration doesn’t start at the time of play; players should make sure they drink appropriate amounts of water the night before and the time leading up to play, as well as game day.

5. A. Is diet or nutrition taken under consideration as a preventative technique for the kids? If so, who delivers that education?

B. What training is provided for you and your staff?
Answer: Coach 1 expressed that they discuss the importance of being hydrated and the importance of getting enough protein, especially after a workout. He said that they try to make sure that athletes get protein in their system within 45 minutes post-workout. Also, they have provided players with articles that have been written about nutrition, and if players seem to have inadequate intake, they may have a trainer speak to them about it. Coach 2 spoke more about the coaches and their training on nutrition. He stated that they take an online nutrition class from the National High School governing body. He said that the coaches discuss nutrition in great detail, and frequently discuss it with student athletes.

6. Basketball practice starts in October/November. If a team makes playoffs for fall sports teams, how do you avoid overtraining?

Answer: Coach 1 expressed that if a team does not make fall sports playoffs, the first basketball practice of the year falls on the last game of the fall sports regular season. However, both coaches said that athletes will generally get a week of rest (that is with no practice/game) before beginning the next sport. However, Coach 1 still wants them to mentally prepare. Coach 2 had a more relaxed approach. He expressed that they were welcome to come join the team, but only when they feel comfortable. This allows students to develop their own sense of rest and ability to participate in practice.

7. How are student athletes selected to make the team?

Answer: Coach 2 stated that players are selected based on attitude, team orientation, great effort, and ability to play. Those aspects will be observed throughout tryouts, and coaches choose who makes/doesn’t make the team. Both coaches expressed that selected students must be cleared by doctors as being able to participate. They also said
that parents are required to fill out a state-concussion form (Appendix 3), and must have emergency medical contact information on file (Appendix 4, p. 4).

8. **Are there any policy and procedures for specific injuries?**

   **Answer:** Coach 1 expressed that policies and procedures for all injuries are directed though the athletic trainer and that they ask student athletes to see trainers about injuries. He said that the trainer communicates major injuries to head coaches. Coach 2 put more emphasis on head and neck injuries, because the biggest concern is these injuries. He said that if these occur, the coaching staff makes sure to keep that athlete still, check what sensations they have, and make sure the injured player remains stabilized until someone with appropriate medical training on field to help.

9. **A. Who evaluates injuries?**

   **B. When injury occurs during game, does trainer go out and access/treat injury?**

   **C. What about after a game, are there referrals to physicians? A specific one? What credentials?**

   **D. What if student athletes do not have private insurance?**

   **Answer:** Coach 1 response was that all injuries on their behalf are directed though the athletic trainer. Trainers must be on site for all games, provided by the home team. If injury occurs at an away game the next day there is a system in place where player can report to their team trainer and confirm that they received adequate treatment. After any game the coaching staff takes inventory on who needs ice and minor aid, but usually most aid is performed by trainer. If injuries are major they use emergency medical forms to make and document the best decisions. Head injuries are taken very seriously. Both
coaches expressed that all head injuries would get referred to the trainer, and the trainer makes the call on whether a physician is needed.

All players are asked to have proper medical coverage insurance when playing. When students are not covered, the trainer uses his connections to various doctors etc., to try to help out the school and program as needed. Coach 2 had a similar system at the last school that he coached for but his new job offered a different experience. He expressed that at the Ohio school that he came from prior; he had student trainers at practices and games to treat minor injuries. They had a registered adult trainer who would take care of serious injuries. He was learning about the existing affiliation with trainers at Yellow Springs. He said that private insurance is a part of the student athlete/parent’s liability and is included as on the checklist item on the pre-season physical. The fact that physicians document student medical insurance status releases the school and the OHSAA from liability.

10. **What paperwork is necessary for injured athletes to return to practice/ play?**

   **Answer:** Both coaches expressed that if an injured athlete is seen by a physician, they had to follow whatever guidelines for return that the physician puts in place. Otherwise, trainers and the player with his parents discuss the best recovery/rehabilitation plan for the student and implement that.

11. **A. In basketball, ankle and knee injuries are the most prevalent. Are there any criteria for the type of shoes the athlete must wear for safe play?**

   **B. What about need-based equipment aid?**

   **Answer:** Coach 1 said that they present athletes with a choice of team shoes (usually two or three options), that are designed specifically for basketball and that provide ankle
support. Both coaches said that supportive shoes are the only equipment needed and that parents are required to cover their shoes. However, Coach 2 said that there were not any criteria, and was actually surprised as someone who had been around basketball his entire life that the new hottest basketball shoes are “low-tops” which have very limited ankle support. He personally preferred that players use high-top shoes, but couldn’t force them to do so. He also stated that if somebody had a knee injury they would probably be placed into a knee brace, but that would be the trainer or physician’s decision to make.

12. Some players play both Junior Varsity and Varsity. What is your policy concerning this dual play and how is overtraining avoided?

Answer: Coach 1 elaborated their policy: if a player needs it or deserves playing time then they will get playing time in a game. Both coaches mentioned that the state limits players to only 5 quarters per night which prevents over-exertion. Coach 1 went on to say that as the season goes on, the amount of time players spend in practice decreases, and that they try to avoid knee straining activities. Coach 2 had a different system. He mentioned that everybody went through the same practice so there was no potential for over-training in these situations.

13. A. Is there a sleep policy?

B. Are you as a coach educated on health?

C. How is that evaluated?

Answer: Coach 1, being aware of the recommended hours for sleep, thought that if it becomes an issue, the coaching staff will address it. However, it’s not usually something they typically dictate. They do remind parents at the beginning of the season to make sure kids are getting enough sleep for their increased activities. Coach 2 said that no
sleep policy existed. However, he always tells his players to get adequate hydration and sleep, to take care of their bodies, and to eat healthy after every practice. He noted that although he was not certified as a fitness trainer, he has worked in the fitness field and has a good idea of the proper techniques of getting healthy and getting fit. He believes that health, fitness, and nutrition all go together.

14. What are your policies on double practices? (Two practices in one day)

   Answer: In case of double practices, Coach 1 keeps players out of the conditioning part of one of the practices because they are aware that players could possibly over-exert themselves. If they do double up, they usually do one hour additional instead of doing two hours of one and two hours in the other. The duration of practices varies. He also stated that they often dismiss players from practices because the student athletes will not necessarily recognize the potential for over-training. Coach 2 expressed that they didn’t have two-a-day practices this year. He said he has done those in the past and that he had to make sure that one practice is mentally oriented and the other more physically oriented, so over-training is avoided.

15. A. What policies and procedures are missing but needed?

   B. Which ones need to be clarified? (Any comments they have)

   Answers: Coach 1 mentioned that injuries needed to be directed through the trainer first, because the trainer may have the player with a minor injury up-and-ready after a week. He felt that if a player goes to a physician first, that physician may not be sport-specific and could erroneously recommend that the player sit out three weeks. They have to abide by what the doctor says. He wants to ensure that the player lets the trainer direct him to a sports trained physician. However, he wants what’s in the best interest of the players.
He states that he wouldn’t sacrifice a player’s body just to get an edge or a “win.” He also mentioned that it’s very important that players report minor injuries early because minor injuries could lead into bigger injuries if not addressed properly. Coach 2 thought that the most important thing as a new coach is emphasizing the importance of proper nutrition and how that relates to being healthy. Also, he suggested more offseason training so student athletes would be able to compete with bigger schools.

**Discussion**

The coaches provided very clear and detailed answers in the interview. The information that the coaches provided regarding policies and regulations followed similar to the OHSAA guidelines. Their answers from the interview indicated that they were very aware of the policies and regulations that they are required to follow as high school basketball coaches in Ohio. Based on the responses from the coaches, they are aware of the complex nature of injuries in basketball and abide by the concussion-prevention rules and regulations provided by OHSSA. The coaches found OHSAA’s guidelines very useful and user friendly. The precautions that the coaches are taking to make sure that their players are trained properly and well rested are indicative of their awareness of individual injury risk prevention. Both of the coaches valued the health of their players over winning games.

**Practice**

Based on knowledge established in the literature, state guidelines, and coaches reporting, several gaps can be identified that, if addressed, would benefit public health in student athletics.
Practice gaps.

Shoe structure.

Public health is burdened as the emergency departments are constantly taking on sport-related injuries contributed mostly to strains and sprains (Gage et al., 2012) which can be a direct result of playing a sport like basketball that constantly puts stress on the knee, ankle and foot joints. Basketball related injuries are 39.7% in the ankle/foot, 14.7% in the knee, 13.6% in the head/face/foot, and 8.4% in the hip/thigh/upper leg (Longo et al., 2012). The most common surgery for injured basketball players takes place in the knee (Rechel et al., 2011). If there were more mandatory preventative measures taken, such as shoes that provide better ankle support to ensure that young players have a lower risk of injury, the emergency department may see a decrease in sports-related specific muscle training injury patients.

A mini training camp with particular exercises to strengthen the hamstring muscle proves to prevent ACL injuries (Longo et al., 2012). Youth ACL injury prevention programs should take into account an administered preseason segment and in-season segment that includes a thorough warm up, stretching and exercises aimed at strengthening the lower extremity and teaching landing techniques such as “soft landing” (Paszkewicz et al., 2012). Other questions have emerged regarding players with past injuries and how those past injuries may affect their range of physical motion and movements in regards to making them more vulnerable to future injuries (McGill, Andersen, & Horne, 2012). However, there would need to be a bigger study population to get an accurate reading on injury related to past-injury-induced range of motion (McGill et al., 2012).
Dietary consultants.

It could be helpful if schools would consult diet evaluation to athletes to ensure that they are receiving proper nutrients and hydration. Even if schools hired a dietary consultant solely for the purpose of giving dietary advice to the student athlete, it would be only beneficial for the student athletes. It is proven that individuals who have understanding of an adequate and balanced diet and reflect this knowledge in their behavior are considered to have more success in the world of sports (Ozdogan & Ozcelik, 2011). This guidance could directly improve quality of performance and may prevent certain injuries or illness from occurring because of their bodies being at maximum potential strength. Dehydration can cause cramps that could increase risk for physical injury. Because hydration varies from individual to individual, there is no current simple time-effective way to measure hydration for player safety. However, I would recommend that it be mandatory for coaches to give players unlimited access to the water fountain throughout practice.

Practice Strengths.

Ohio Senate Bill 26 was amended (Ohio State Senate Bill 26, 2014) requiring student athletes to present a physician’s note for clearance to participate in physical activity following all concussion-related injuries; thereby not holding the school or coaches liable for making this medical decision. Prior to this amendment rule, many schools voluntarily had their own policies requiring the student athletes to obtain a clearance note from a physician regarding concussions related injuries to neutralize the risk of being liable. Now the physician’s release is a requirement mandated by the state. This is a practice strength because if the coach or student athlete had complete control of concussion diagnosis and injury-return status, there may be misjudgments and the student athlete could possibly be put back into competition before his
body is ready, which could enhance the risk of a more severe concussion along with other injuries.

Both of the interviewed coaches found it important that kids do not over exert their bodies. “Two-a-day” practices if implemented were carefully conducted so kids would have adequate rest. One practice would be more concentrated on the mental side of the game, and the other would be more physically demanding. The sports medicine literature stresses that rest is just as important as exercise (Fitwatch, 2013).

Policy Gaps

Lack of required safety gear.

Mouth guards.

No school, regional, state, or national policy directly requires mouth guards for basketball players, despite the facts that many researchers prove mouth guards are effective in reducing dental trauma (Lesic et al., 2011). Nevertheless, many individual players and coaches choose to use them. Cultural factors may weigh in on the use of mouth guards as players tend to follow the trends of professional athletes. For instance, professional basketball player Lebron James often wears a mouth guard, and many young athletes may choose to emulate such players because they look up to them. Injuries to the head in mouth are more common in basketball and soccer than in American football (Morrow & Kuebker, 1986 cited in Lesic et al., 2011) which could result from not having a facial guard.

Ankle braces.

There is also no school, local, regional or state policy that directly requires student athletes to wear prophylactic ankle braces that are proven as an effective and proficient way to reduce occurrences of ankle injuries (Farwell et al., 2013). Lace-up ankle braces are proven to
lower the incidence of acute ankle damage as well, however they did not reduce the severity of the injury when it did occur (McGuine, Brooks, & Hetzel, 2011). It may be helpful to make such equipment mandatory along with some preseason strengthening to improve the overall health, performance and longevity of the athletes, as well as lessening the clinical/ public health burden.

**Self regulation and self report.**

The interviewed coaches indicated that OHSAA mandated restrictions for coach-athlete contact. The coaches are given specific time periods in which to train their student athletes. However, the restrictions are self-regulated which could lead to error and slippage. Even a system with random audits or audits every three years would be useful to help encourage folks not to get sloppy on following the rules. Even if there is no outright intent to skirt the rules, humans tend to be sloppy and could easily slip into violation if they're simply not keeping good track of their times and practices. Knowing that someone can or will check up on you can be a very good preventive measure.

**Policy Strengths**

OHSAA’s policies regarding coach and staff permits and the requirements met in those permits are beneficial for the Ohio high school player’s health and development. Basketball proves to have low concussion rates (Marar et al, 2012) that result from it not being a “contact sport.” OHSAA stresses preventative rules for concussion-like injuries that give the players the best chance of proper recovery. Requiring student athletes to provide a clearance form signed by a physician before resuming competition prevents situations where players, coaches, and parents may be uncertain about the athlete’s condition. OHSAA, supervision of Ohio’s high school athletics provides necessary order, regulations, and incentives that organizes and governs Ohio’s high school sports.
Conclusion and Recommendations

The purpose of this study was to describe the contributing factors to high school basketball injuries in Greene County, Ohio, focusing on policies and prevention practices. The coaches on staff at schools play a central role in ensuring that policies and procedures are implemented so their athletes have the best chance to perform well and safely. Information regarding contributing factors (protective equipment, player position, nutrition, injury patterns, and sport-dynamics) was documented. Policy and prevention practice strengths and weaknesses were observed through research and through the conducted coach interviews.

Young athletes are responsible for over 2 million injuries yearly (CDC, 2006). This puts a burden on the public health community because these injuries are taking up a lot of space in the emergency department and may also result in prolonged health problems if the injuries are severe. The dynamic nature of the sport of basketball can cause a wide range of injuries. The sport is very stressful on knee and ankle joints resulting in high injury rates in ankle/ knee areas. I found that there is no required protective equipment in basketball. I consider that non-requirement a gap in policy/practices. Studies have shown the effectiveness of ankle braces lowering injury rates (Farwell, Powden, & Meaghan, 2013).

The Ohio High School Athletic Association (OHSAA) oversees all high school sports in Ohio and The National Federation of State High School Associations (NFHS) oversees OHSAA. OHSAA implements policies and procedures that all coaches/ schools in Ohio must follow. The interviewed coaches showed great awareness of OHSAA’s rules and regulations. The information that the coaches provided was very similar to OHSAA’s requirements. However, OHSAA implemented a self-monitoring system for the coaches to abide by regarding coach-player contact, which may lead to rule violation. Even if there is no outright intent to skirt the
rules, humans tend to be sloppy and could easily slip into violation if they're simply not keeping

good track of their times and practices. Knowing that someone can or will check up on you can

be a very good preventive measure.

This study is important because it could enhance awareness which may help coaches

prevent future injuries from occurring. I believe that schools should consult nutritionists/diet
evaluation to athletes to ensure that they are receiving proper nutrients and hydration. It is

proven that knowledge of an adequate and balanced diet when reflected in behavior can improve

one’s performance in sports (Ozdogan & Ozcelik, 2011). This nutritional guidance could
directly improve quality of performance and may prevent certain injuries or illness from

occurring because of their bodies being at maximum potential strength. I would also recommend

that student athletes be required to wear mouth guards. No school, regional, state, or national
policy directly requires mouth guards for basketball players, despite the fact that many

researchers prove mouth guards are effective in reducing dental trauma (Lesic et al., 2011). If
there were more mandatory preventative measures taken such as shoes that provide better ankle
support to ensure that young players have a lower risk of injury, the emergency department may

see a decrease in sports-related specific muscle training injury patients. I would also recommend

a mini-preseason training camp with particular exercises to strengthen the hamstring muscles
which is proven to prevent ACL injuries (Longo et al., 2012).

There are some public health implications that could benefit coaches and players on a
local, state, and national level. Locally, coaches can improve and benefit from these
recommendations because there are practices such as players wearing mouth guards, ankle
braces and shoes that are supportive. At the state level they are working to provide guidelines
through OHSAA that give the players the best chance to have a successful and safe experience.
However, the state could also improve by adopting these recommendations because they have the power to enforce regulations to ensure that players play at the safest level possible. The state could enact a mouth guard policy or a standard basketball shoe policy. National public health could make better use of celebrities to promote new safety policies. Young athletes often imitate professional athletes and celebrities. At the national level, getting more celebrities involved in promoting prevention messages may make a significant impact.
References


Ohio Senate Bill 26 (Amended). 130th General Assembly. (2014). An act to amend sections 3313.539, 3319.303, and 3707.48 of the Revised Code to correct a cross reference with regard to concussions and head injuries in athletic activities organized by youth sports organizations, to clarify certain references to organizations that regulate interscholastic athletics, and to declare an emergency. Retrieved January 26, 2014 from http://www.legislature.state.oh.us/bills.cfm?ID=130_SB_26


Appendix 1: Wright State University IRB Approval

DATE: December 20, 2013

TO: Issa Walker, PI, Student
    Community Health
    Nikki Rogers, Co-PI, Faculty Advisor

FROM: B. Laurel Elder, Ph.D.
      Chair, IRB-WSU

SUBJECT: SC# 5372
‘Local High School Athletic Program Safety Policy and Practice’

Your study does not meet the definitions for human subjects research. Therefore the proposal submitted does not need approval from the Wright State University Institutional Review Board.

If you have any questions or require additional information, please call Jodi Blackledge, Program Facilitator at 775-3974.

Thank you!
Appendix 2 – Interview Questions

1. A. What is done prior to playing season to ensure the lowest risk of injury for student athletes?
   B. Are there restrictions on coach/athlete contact year-around?
   C. How opportunities to train are created? Are the coaches allowed to be involved in summer leagues, camps, and weight lifting in the off-season?
   D. What authorities oversee such activities?

2. A. What state policy and procedures exist for high school athletics?
   B. What training do you receive about these?

3. A. Do you have certified athletic trainers on site during play? If so why?
   B. Do you choose to have them on site or are you instructed to?
   C. What are the credentials they have to possess?

4. A. Do you make sure students drink enough water during practice and games?
   B. What standards are used for hydration?

5. A. Is diet or nutrition taken under consideration as a preventative technique for the kids?
   If so, who delivers that education?
   B. What training is provided for you and your staff?

6. Basketball practice starts in October/November. If a team makes playoffs for fall sports teams, how do you avoid overtraining?

7. How are student athletes selected to make the team?

8. Are there any policy and procedures for specific injuries?

9. A. Who evaluates injuries?
   B. When injury occurs during game, does trainer go out and access/treat injury?
C. What about after a game, are there referrals to physicians? A specific one? What credentials?
D. What if student athletes do not have private insurance?

10. What paperwork is necessary for injured athletes to return to practice/play?

11. A. In basketball, ankle and knee injuries are the most prevalent. Are there any criteria for the type of shoes the athlete must wear for safe play?
B. What about need-based equipment aid?

12. Some players play both Junior Varsity and Varsity. What is your policy concerning this dual play and how is overtraining avoided?

13. A. Is there a sleep policy?
B. Are you as a coach educated on health?
C. How is that evaluated?

14. What are your policies on double practices? (Two practices in one day)

15. A. What policies and procedures are missing but needed?
B. Which ones need to be clarified?(Any comments they have)
Appendix 3: Ohio Department of Health Concussion Information Sheet

Ohio Department of Health Concussion Information Sheet
For Interscholastic Athletics

Dear Parent/Guardian and Athletes,

This information sheet is provided to assist you and your child in recognizing the signs and symptoms of a concussion. Every athlete is different and responds to a brain injury differently, so seek medical attention if you suspect your child has a concussion. Once a concussion occurs, it is very important your athlete return to normal activities slowly, so he/she does not do more damage to his/her brain.

What is a Concussion?
A concussion is an injury to the brain that may be caused by a blow, bump, or jolt to the head. Concussions may also happen after a fall or hit that jars the brain. A blow elsewhere on the body can cause a concussion even if an athlete does not hit his/her head directly. Concussions can range from mild to severe, and athletes can get a concussion even if they are wearing a helmet.

Signs and Symptoms of a Concussion
Athletes do not have to be "knocked out" to have a concussion. In fact, less than 1 out of 10 concussions result in loss of consciousness. Concussion symptoms can develop right away or up to 48 hours after the injury. Ignoring any signs or symptoms of a concussion puts your child's health at risk.

Signs Observed by Parents of Guardians
- Appears dazed or stunned.
- Is confused about assignment or position.
- Forgets plays.
- Is unsure of game, score or opponent.
- Moves clumsily.
- Answers questions slowly.
- Loses consciousness (even briefly).
- Slows behavior or personality changes (irritability, sadness, nervousness, feeling more emotional).
- Can't recall events before or after hit or fall.

Symptoms Reported by Athletes
- Any headache or "pressure" in head. (How badly it hurts does not matter.)
- Nausea or vomiting.
- Balance problems or dizziness.
- Double or blurry vision.
- Sensitivity to light or noise.
- Feeling sluggish, heavy, foggy or groggy.
- Concentration or memory problems.
- Confusion.
- Does not "feel right."
- Trouble falling asleep.
- Sleeping more or less than usual.

Be Honest
Encourage your athlete to be honest with you, his/her coach and your health care provider about his/her symptoms. Many young athletes get caught up in the moment and/or feel pressured to return to sports before they are ready. It is better to miss one game than the entire season... or risk permanent damage!

Seek Medical Attention Right Away
Seeking medical attention is an important first step if you suspect or are told your child has a concussion. A qualified health care professional will be able to determine how serious the concussion is and when it is safe for your child to return to sports and other daily activities.
- No athlete should return to activity on the same day he/she gets a concussion.
- Athletes should NEVER return to practices/games if they still have ANY symptoms.
- Parents and coaches should never pressure any athlete to return to play.

The Dangers of Returning Too Soon
Returning to play too early may cause Second Impact Syndrome (SIS) or Post-Concussion Syndrome (PCS). SIS occurs when a second blow to the head happens before an athlete has completely recovered from a concussion. This second impact causes the brain to swell, possibly resulting in brain damage, paralysis, and even death. PCS can occur after a second impact. PCS can result in permanent, long-term concussion symptoms. The risk of SIS and PCS is the reason why no athlete should be allowed to participate in physical activity before they are cleared by a qualified health care professional.

Recovery
A concussion can affect school, work, and sports. Along with coaches and teachers, the school nurse, athletic trainer, employer, and other school administrators should be aware of the athlete’s injury and their roles in helping the child recover.

During the recovery time after a concussion, physical and mental rest are required. A concussion upsets the way the brain normally works and causes it to work longer and harder to complete even simple tasks. Activities that require concentration and focus may make symptoms worse and cause the brain to heal slower. Studies show that children’s brains take several weeks to heal following a concussion.

www.healthyohiogram.org/concussion

Rev. 12.19
Returning to Daily Activities
1. Be sure your child gets plenty of rest and enough sleep at night — no late nights. Keep the same bedtime weekdays and weekends.
2. Encourage daytime naps or rest breaks when your child feels tired or worn-out.
3. Limit your child’s activities that require a lot of thinking or concentration (including social activities, homework, video games, texting, computer, driving, job-related activities, movies, parties). These activities can slow the brain’s recovery.
4. Limit your child’s physical activity, especially those activities where another injury or blow to the head may occur.
5. Have your qualified health care professional check your child’s symptoms at different times to help guide recovery.

Returning to School
1. Your athlete may need to initially return to school on a limited basis, for example for only half-days, at first. This should be done under the supervision of a qualified health care professional.
2. Inform teacher(s), school counselor or administrator(s) about the injury and symptoms. School personnel should be instructed to watch for:
   a. Increased problems paying attention.
   b. Increased problems remembering or learning new information.
   c. Longer time needed to complete tasks or assignments.
   d. Greater irritability and decreased ability to cope with stress.
   e. Symptoms worsen (headache, tiredness) when doing schoolwork.
3. Be sure your child takes multiple breaks during study time and watch for worsening of symptoms.
4. If your child is still having concussion symptoms, he/she may need extra help with school-related activities. As the symptoms decrease during recovery, the extra help or supports can be removed gradually.

Resources
ODH Violence and Injury Prevention Program
www.healthyohioprogram.org/vipp/injury.aspx
Centers for Disease Control and Prevention
www.cdc.gov/Concussion
National Federation of State High School Associations
www.nfhs.org
Brain Injury Association of America
www.biausa.org/

Returning to Play
1. Returning to play is specific for each person, depending on the sport. Starting 4/25/13, Ohio law requires written permission from a health care provider before an athlete can return to play. Follow instructions and guidance provided by a health care professional. It is important that you, your child and your child’s coach follow these instructions carefully.
2. Your child should NEVER return to play if he/she still has ANY symptoms. (Be sure that your child does not have any symptoms at rest and while doing any physical activity and/or activities that require a lot of thinking or concentration.)
3. Be sure that the athletic trainer, coach and physical education teacher are aware of your child’s injury and symptoms.
4. Your athlete should complete a step-by-step exercise-based progression, under the direction of a qualified health care professional.
5. A sample activity progression is listed below.
   Generally, each step should take no less than 24 hours so that your child’s full recovery would take about one week once they have no symptoms at rest and with moderate exercise.*

Sample Activity Progression*
Step 1: Low levels of non-contact physical activity. Provided NO SYMPTOMS return during or after activity. (Examples: walking, light jogging, and easy stationary biking for 20-30 minutes).
Step 2: Moderate, non-contact physical activity. Provided NO SYMPTOMS return during or after activity. (Examples: moderate jogging, brief sprint running, moderate stationary biking, light calisthenics, and sport-specific drills without contact or collisions for 30-45 minutes).
Step 3: Heavy, non-contact physical activity. Provided NO SYMPTOMS return during or after activity. (Examples: extensive sprint running, high intensity stationary biking, resistance exercise with machines and free weights, more intense non-contact sports specific drills, agility training and jumping drills for 45-60 minutes).
Step 4: Full contact in controlled practice or scrimmage.
Step 5: Full contact in games play.

*If any symptoms occur, the athlete should drop back to the previous step and try to progress again after a 24 hour rest period.

Ohio Department of Health
Violence and Injury Prevention Program
246 North High Street, 8th Floor
Columbus, OH 43215
(614) 466-2144
www.healthyohioprogram.org/concussion
Ohio Department of Health Concussion Information Sheet
For Interscholastic Athletics

Acknowledgement of Having Received the “Ohio Department of Health’s Concussion and Head Injury Information Sheet”

By signing this form, as the parent/guardian/care-giver of the student-athlete named below, I acknowledge receiving a copy of the concussion and head injury information sheet prepared by the Ohio Department of Health as required by section 3313.539 of the Revised Code.

I understand concussions and other head injuries have serious and possibly long-lasting effects.

By reading the information sheet, I understand I have a responsibility to report any signs or symptoms of a concussion or head injury to coaches, administrators and my student-athlete’s doctor.

I also understand that coaches, referees and other officials have a responsibility to protect the health of the student-athletes and may prohibit my student-athlete from further participation in athletic programs until my student-athlete has been cleared to return by a physician or other appropriate health care professional.

________________________________________  ____________________________
Athlete                                      Date

________________________________________  ____________________________
Parent/Guardian                              Date
## OHIO HIGH SCHOOL ATHLETIC ASSOCIATION

### PREPARTICIPATION PHYSICAL EVALUATION 2012-2013

**HISTORY FORM**

(Note: This form is to be filled out by the student and parent prior to seeing the medical examiner. The medical examiner should keep this form in the chart.)

- **Date of Exam:**
- **Date of birth:**
- **Sex:**
- **Age:**
- **Grade:**
- **School:**
- **Height:**
- **Weight:**
- **Address:**
- **Emergency Contact:**
- **Relationship:**
- **Phone:**
- **E-mail:**

**Medications and Allergies:** Please list all prescription and over-the-counter medications and supplements (herbals and nutritional including energy drinks/protein supplements) that you are currently taking.

<table>
<thead>
<tr>
<th>Medications and Allergies</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

**Do you have allergies?** □ Yes □ No  
**If yes, please identify specific allergy below.**

<table>
<thead>
<tr>
<th>Allergy</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

**Explain “Yes” answers below. Circle questions you don’t know the answers to.**

**GENERAL QUESTIONS:**

<table>
<thead>
<tr>
<th>General Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Has a doctor ever denied or restricted your participation in sports for any reason?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2. Do you have any ongoing medical condition? If yes, please identify below: Asthma; Arthritis; Diabetes; Infections; Other.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2. Have you ever spent the night in the hospital?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>3. Have you ever had surgery?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**HEART HEALTH QUESTIONS:**

<table>
<thead>
<tr>
<th>Heart Health Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have you ever passed out or nearly passed out during exercise?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2. Have you ever been told by a doctor that your heart was beating too fast or too slow?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>3. Does your heart ever race or skip beats (irregular beats) during exercise?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>4. Does your heart rate increase when you stand up?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>5. Has a doctor ever told you that you have any heart problems?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**MEDICAL HISTORY:**

<table>
<thead>
<tr>
<th>Medical History</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you have a history of vision disorders or epilepsy?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2. Do you have a history of seizures or epilepsy?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>3. Do you have a history of heart disease or stroke?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>4. Do you have a history of diabetes?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>5. Do you have a history of asthma?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>6. Do you have a history of allergic reactions?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>7. Do you have a history of obesity?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>8. Do you have a history of drug addiction?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>9. Do you have a history of alcohol addiction?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>10. Do you have a history of blood disorders?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>11. Do you have a history of suicide attempts?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>12. Do you have a history of mental health issues?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>13. Do you have a history of depression?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>14. Do you have a history of anxiety disorders?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>15. Do you have a history of sleep disorders?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>16. Do you have a history of mood disorders?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>17. Do you have a history of substance abuse?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>18. Do you have a history of eating disorders?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**DIABETES QUESTIONS:**

**DIABETES QUESTIONS:**

<table>
<thead>
<tr>
<th>Diabetes Questions</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have you been diagnosed with diabetes?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2. Do you take insulin or oral medication for diabetes?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>3. Have you ever had ketoacidosis?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>4. Have you ever had a diabetic coma?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**BONE AND JOINT QUESTIONS:**

<table>
<thead>
<tr>
<th>Bone and Joint Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have you ever had an injury that required surgery?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2. Have you ever had a bone fracture?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>3. Have you ever had a joint replacement?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>4. Have you ever had a joint dislocation?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**FEMALES ONLY:**

<table>
<thead>
<tr>
<th>Females Only Questions</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have you ever had a menstrual period?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2. Have you ever had an abortion?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>3. Have you ever had a miscarriage?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>4. Have you ever had a stillbirth?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**Do you have any periods you would like to discuss with a doctor?**

Explain “yes” answers here.

- Signature of Parent / Guardian:
- Date:
- The student has a family member that is a licensed health care provider.

### THE ATHLETE WITH SPECIAL NEEDS: SUPPLEMENTAL HISTORY FORM

**Ohio High School Athletic Association**

**Preparticipation Physical Evaluation 2012-2013**

**Page 2 of 6**

**Date of Exam:_________________________  Date of birth:_________________________**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Age</th>
<th>Grade</th>
<th>School</th>
<th>Sport(s):</th>
</tr>
</thead>
</table>

1. Type of disability
2. Date of disability
3. Classification (if available)
4. Cause of disability (birth, disease, accident/truma, other)
5. List the sports you are interested in playing

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Do you regularly use a brace, crutch or prosthesis?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Do you use a special brace or prosthesis for sports?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Do you have any birth defects, pressure sores, or any other skin problems?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Do you have a hearing loss? Do you use a hearing aid?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Do you have a visual impairment?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Do you have any special devices for bowel or bladder function?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Do you have any hearing problems?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Have you had any accidents or injuries?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Have you ever been diagnosed with a heart related (hypertension) or circulatory (hypertension) illness?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Do you have muscle weakness?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Do you have a frequent illness that cannot be controlled by medication?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Explain "yes" answers here

---

Please indicate if you have ever had any of the following:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergic reaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asthma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Headache</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hay fever</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhinitis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sinus infections</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allergic to food or drugs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ulcers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermatitis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enlarged spleen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hemophilia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epilepsy or other neurological conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty controlling bowel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty controlling bladder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbness or tingling in arms or hands</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbness or tingling in legs or feet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weakness in arms or legs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weakness in legs or feet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recent change in coordination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recent change in ability to walk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spina bifida</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taeniasis</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Explain "yes" answers here

---

I hereby state that, to the best of my knowledge, my answers to the above questions are complete and correct.

Signature of Student:_____________  Signature of parent/guardian:_____________  Date:_____________

Ohio High School Athletic Association

PREPARTICIPATION PHYSICAL EVALUATION 2012-2013

Page 3 of 6

PHYSICAL EXAMINATION FORM

Name __________________________ Date of Birth __________________________

PHYSICIAN REMINDERS

1. Consider additional questions on more sensitive issues
   - Do you feel stressed out or under a lot of pressure?
   - Do you ever feel sad, hopeless, depressed or anxious?
   - Do you feel safe at your home or residence?
   - Have you ever tried cigarettes, chewing tobacco, snuff, or dip?
   - During the past 30 days, did you use chewing tobacco, snuff, or dip?
   - Do you drink alcohol or use any other drugs?
   - Have you ever taken any supplements to help you gain or lose weight or improve your performance?
   - Do you wear a seat belt, use a helmet or use a condom?
   - Do you consume energy drinks?

2. Consider reviewing questions on cardiovascular symptoms (questions 5-14).

<table>
<thead>
<tr>
<th>EXAMINATION</th>
<th>Height</th>
<th>Weight</th>
<th>☐ Male</th>
<th>☐ Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP /</td>
<td>/</td>
<td>/</td>
<td>Pulse</td>
<td>Vision R L/</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MEDICAL</th>
<th>NORMAL</th>
<th>ABNORMAL FINDINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mass, symmetrical, high arched palate, pectus excavatum, arachnodactyly,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>arm span &gt; height, hypertelorism, myopia, PMP, atrial insufficiency</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eyes/ears/nose/mouth</td>
<td>Fair equal</td>
<td></td>
</tr>
<tr>
<td>Hearing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lymph nodes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart</td>
<td>Murmur (assaulted standing, supine, +, +)</td>
<td></td>
</tr>
<tr>
<td>Location of the point of maximal impulse (PM)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulsing</td>
<td>Simultaneous femoral and radial pulses</td>
<td></td>
</tr>
<tr>
<td>Lung</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abdomen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gastrointestinal (may include)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin</td>
<td>HSV, lesions suggestive of MRSA, tense corps</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neurologic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUSCULOSKELETAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neck</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Back</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoulder/arm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elbow/forearm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wrist/hand/fingers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hip/thigh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leg/ankle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foot/toes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Functional</td>
<td>Dork walk, single leg hop</td>
<td></td>
</tr>
</tbody>
</table>

*Consider EKG, echocardiogram, or referral to cardiology for abnormal cardiac history or exam.
*Consider EEG if in private setting. Having third party present is recommended.
*Consider cognitive or baseline neuropsychiatric testing if a history of significant concussion.

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CLEARANCE FORM

Preparticipation Physical Evaluation 2012-2013

Note: Authorization forms (pages 5 and 6) must be signed by both the parent/guardian and the student.

Name ___________________________ Sex □ M □ F Age ________ Date of birth ________

□ Cleared for all sports without restriction

□ Cleared for all sports without restriction with recommendations for further evaluation or treatment for

□ Not Cleared

□ Pending further evaluation

□ For any sport

□ For certain sport

Reason ________________________________________________________________

Recommendations ________________________________________________________

I have examined the above-named student and completed the preparticipation physical evaluation. The student does not present apparent clinical contraindications to practice and participate in the sport(s) as outlined above. A copy of the physical exam is on record in my office and can be made available to the school at the request of the parents. In the event that the examination is conducted en masse at the school, the school administrator shall retain a copy of the PPE. If conditions arise after the student has been cleared for participation, the physician may rescind the clearance until the problem is resolved and the potential consequences are completely explained to the athlete (and parents/guardians).

Name of physician or medical examiner (print/type) ___________________________ Date of Exam ________

Address ___________________________ Phone ___________

Signature of physician/medical examiner ___________________________ MD, DO, D.C., P.A., or A.N.P.

Emergency Information

Personal Physician ___________________________ Phone ___________

In case of Emergency, contact ___________________________ Phone ___________

Allergies _______________________________________________________________

Other Information _______________________________________________________

__________________________________________________________

THE STUDENT SHALL NOT BE CLEARED TO PARTICIPATE IN INTERSCHOLASTIC ATHLETICS UNTIL THIS FORM HAS BEEN SIGNED AND RETURNED TO THE SCHOOL

OHSAA AUTHORIZATION FORM 2012-2013

I hereby authorize the release and disclosure of the personal health information of , ("Student").

The information described below may be released to the School principal or assistant principal, athletic director, coach, athletic trainer, physical education teacher, school nurse or other member of the School's administrative staff as necessary to evaluate the Student's eligibility to participate in school sponsored activities, including but not limited to interscholastic sports programs, physical education classes or other classroom activities.

Personal health information of the Student which may be released and disclosed includes records of physical examinations performed to determine the Student's eligibility to participate in school sponsored activities, including but not limited to the Pre-participation Evaluation form or other similar document required by the School, prior to determining eligibility of the Student to participate in classroom or other School sponsored activities; records of the evaluation, diagnosis and treatment of injuries which the Student incurred while engaging in school sponsored activities, including but not limited to practice sessions, training and competition; and other records as necessary to determine the Student's physical fitness to participate in school sponsored activities.

The personal health information described above may be released or disclosed to the School by the Student's personal physician or physicians; a physician or other health care professional retained by the School to perform physical examinations to determine the Student's eligibility to participate in certain school sponsored activities or to provide treatment to students injured while participating in such activities, whether or not such physicians or other health care professionals are paid for their services or volunteer their time to the School; or any other EMT, hospital, physician or other health care professional who evaluates, diagnoses or treats an injury or other condition incurred by the student while participating in school sponsored activities.

I understand that the School has requested this authorization to release or disclose the personal health information described above to make certain decisions about the Student's health and ability to participate in certain school sponsored and classroom activities, and that the School is a not a health care provider or health plan covered by federal HIPAA privacy regulations, and the information described below may be released and disclosed and may not continue to be protected by the federal HIPAA privacy regulations. I also understand that the School is covered under the federal regulations that govern the privacy of educational records, and that the personal health information disclosed under this authorization may be protected by those regulations.

I also understand that health care providers and health plans may not condition the provision of treatment or payment on the signing of this authorization, however, the Student's participation in certain school sponsored activities may be conditioned on the signing of this authorization.

I understand that I may revoke this authorization in writing at any time, except to the extent that action has been taken by a health care provider in reliance on this authorization, by sending a written revocation to the school principal (or designee) whose name and address appears below.

Name of Principal: ___________________________

School Address: _____________________________

This authorization will expire when the student is no longer enrolled as a student at the school.

NOTE: IF THE STUDENT IS UNDER 18 YEARS OF AGE, THIS AUTHORIZATION MUST BE SIGNED BY A PARENT OR LEGAL GUARDIAN TO BE VALID. IF THE STUDENT IS 18 YEARS OF AGE OR OVER, THE STUDENT MUST SIGN THIS AUTHORIZATION PERSONALLY.

_________________________  __________________________
Student's Signature    Birth date of Student, including year

_________________________  __________________________
Name of Student's personal representative, if applicable    Date of legal guardian (documentation must be provided)

_________________________  __________________________
Signature of Student's personal representative, if applicable    Date

A copy of this signed form has been provided to the student or his/her personal representative
2012-2013 Ohio High School Athletic Association Eligibility and Authorization Statement

This document is to be signed by the participant from an OHSAA member school and by the participant's parent.

I have read, understand and acknowledge receipt of the OHSAA brochure entitled "Your Athletic Eligibility," which contains a summary of the eligibility rules of the Ohio High School Athletic Association. I understand that a copy of the OHSAA Handbook is on file with the principal and athletic administrator and that I may review it, in its entirety, if I so choose. All OHSAA bylaws and regulations from the Handbook are also posted on the OHSAA web site at www.ohsaa.org.

I understand that an OHSAA member school must adhere to all rules and regulations that pertain to interscholastic athletics programs that the school sponsors, but that local rules may be more stringent than OHSAA rules.

I understand that participation in interscholastic athletics is a privilege not a right.

Student Code of Responsibility

As a student athlete, I understand and accept the following responsibilities:

- I will respect the rights and beliefs of others and will treat others with courtesy and consideration.
- I will be fully responsible for my own actions and the consequences of my actions.
- I will respect the property of others.
- I will respect and obey the rules of my school and laws of my community, state and country.
- I will show respect to those who are responsible for enforcing the rules of my school and the laws of my community, state and country.
- I understand that a student whose character or conduct violates the school's Athletic Code or School Code of Responsibility is not in good standing and is ineligible for a period of time as determined by the principal.

Informed Consent – By its nature, participation in interscholastic athletics includes risk of injury and transmission of infectious disease such as HIV and Hepatitis B. Although serious injuries are not common and the risk of HIV transmission is almost nonexistent in supervised school athletic programs, it is impossible to eliminate all risk. Participants have a responsibility to help reduce that risk. Participants must obey all safety rules, report all physical and hygiene problems to their coaches, follow a proper conditioning program, and inspect their own equipment daily.

PARENTS, GUARDIANS OR STUDENTS WHO MAY NOT WISH TO ACCEPT RISK DESCRIBED IN THIS WARNING SHOULD NOT SIGN THIS FORM. STUDENTS MAY NOT PARTICIPATE IN AN OHSAA-SPONSORED SPORT WITHOUT THE STUDENT'S AND PARENT'S/GUARDIAN'S SIGNATURE.

I understand that in the case of injury or illness requiring transportation to a health care facility, that a reasonable attempt will be made to contact the parent or guardian in the case of the student-athlete being a minor, but that, if necessary, the student-athlete will be transported via ambulance to the nearest hospital.

To enable the OHSAA to determine whether the herein named student is eligible to participate in interscholastic athletics in an OHSAA member school I consent to the release to the OHSAA any and all portions of school record files, beginning with seventh grade, of the herein named student, specifically including, without limiting the generality of the foregoing, birth and age records, name and residence address of parent(s) or guardian(s), residence address of the student, academic work completed, grades received and attendance data.

I consent to the OHSAA's use of the herein named student's name, likeness, and athletic-related information in reports of contests, promotional literature of the Association and other materials and releases related to interscholastic athletics.

I understand that if I drop a class, take course work through Post Secondary Enrollment Option, Credit Flexibility or other educational options, this action could affect compliance with OHSAA academic standards and my eligibility.

I understand all concussions are potentially serious and may result in complications including prolonged brain damage and death if not recognized and managed properly. Further I understand that if my student is removed from a competition due to a suspected concussion, he or she will be unable to return to competition that day without the written authorization from a physician (M.D. or D.O.) or an athletic trainer which indicates that the student has not been concussed.

By signing this we acknowledge that we have read the above information and that we consent to the herein named student's participation.

*Must Be Signed Before Physical Examination

<table>
<thead>
<tr>
<th>Student's Signature</th>
<th>Birth date</th>
<th>Grade In School</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parent's or Guardian's Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Rev. 3/12
## Appendix 5: List of Tier 1 Core Public Health Competencies Used in CE

<table>
<thead>
<tr>
<th>Domain #1: Analytic/Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify the health status of populations and their related determinants of health and illness (e.g., factors contributing to health promotion and disease prevention, the quality, availability and use of health services)</td>
</tr>
<tr>
<td>Describe the characteristics of a population-based health problem (e.g., equity, social determinants, environment)</td>
</tr>
<tr>
<td>Use methods and instruments for collecting valid and reliable quantitative and qualitative data</td>
</tr>
<tr>
<td>Identify sources of public health data and information</td>
</tr>
<tr>
<td>Identify gaps in data sources</td>
</tr>
<tr>
<td>Adhere to ethical principles in the collection, maintenance, use, and dissemination of data and information</td>
</tr>
<tr>
<td>Use information technology to collect, store, and retrieve data</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain #2: Policy Development and Program Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gather information relevant to specific public health policy issues</td>
</tr>
<tr>
<td>Describe how policy options can influence public health programs</td>
</tr>
<tr>
<td>Describe the public health laws and regulations governing public health programs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain #3: Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicate in writing and orally, in person, and through electronic means, with linguistic and cultural proficiency</td>
</tr>
<tr>
<td>Solicit community-based input from individuals and organizations</td>
</tr>
<tr>
<td>Participate in the development of demographic, statistical, programmatic and scientific presentations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain #4: Cultural Competency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorporate strategies for interacting with persons from diverse backgrounds (e.g., cultural, socioeconomic, educational, racial, gender, age, ethnic, sexual orientation, professional, religious affiliation, mental and physical capabilities)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain #5: Community Dimensions of Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify stakeholders</td>
</tr>
<tr>
<td>Describe the role of governmental and non-governmental organizations in the delivery of community health services</td>
</tr>
<tr>
<td>Identify community assets and resources</td>
</tr>
<tr>
<td>Gather input from the community to inform the development of public health policy and programs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain #6: Public Health Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe the scientific foundation of the field of public health</td>
</tr>
<tr>
<td>Describe the scientific evidence related to a public health issue, concern, or intervention</td>
</tr>
<tr>
<td>Retrieve scientific evidence from a variety of text and electronic sources</td>
</tr>
<tr>
<td>Describe the laws, regulations, policies and procedures for the ethical conduct of research (e.g., patient confidentiality, human subject processes)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain #7: Financial Planning and Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Translate evaluation report information into program performance improvement action steps</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain #8: Leadership and Systems Thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorporate ethical standards of practice as the basis of all interactions with organizations, communities, and individuals</td>
</tr>
<tr>
<td>Participate in mentoring and peer review or coaching opportunities</td>
</tr>
</tbody>
</table>