

# Presence of Athletic Trainers in a Youth Football Organization: A Single Institution's Experience

Jillian E. Urban, PhD; Erica K. Cheramie, LAT, ATC; Mary Kopacki, MS, LAT, ATC;  
Johna K. Register-Mihalik, PhD, LAT, ATC; Jason P. Mihalik, PhD, CAT(C), ATC; Joel D. Stitzel, PhD;  
Daryl A. Rosenbaum, MD

## ABSTRACT

The experience presented in this report could inform other youth football organizations about the challenges and benefits of implementing an athletic trainer at the youth level. The authors report their experience with having an athletic trainer present at practices and game days for one youth football organization (ages 6 to 13) with more than 170 players during two consecutive seasons. [*Athletic Training & Sports Health Care*. 2017;9(2):53-57.]

There are approximately 3 million participants in youth tackle football in the United States.<sup>1</sup> Numbers have trended downward during the past 5 years, possibly due to parental concerns about safety.<sup>2</sup> The injury risk for football is 5 to 7 times that of other youth contact sports,<sup>3</sup> with 13% of youth football injuries classified as

serious.<sup>3</sup> Incidence rates for concussions in players ages 8 to 12 are similar to those of high school and college football players.<sup>4</sup> However, the consequences of concussion in younger athletes are of concern. A previous study suggests that recovery after a concussion may take longer in younger populations undergoing cognitive development.<sup>5</sup> Additionally, the risk of heat illness in youth football players is 10 times that of other youth sports.<sup>6</sup>

Most youth sporting events do not have medical personnel on the sidelines. Instead, some coaches are often required to undergo basic medical training. The training is intended to provide the basics needed to respond appropriately in the event of an injury or emergency.<sup>1,7</sup> For example, American Youth Football requires coaches to take the Centers for Disease Control Heads Up Online Concussion

Training and at least one person carrying a Red Cross Card to be present at all practices. Pop Warner requires at least one person at each practice who is certified in CPR/First Aid or has completed the National Center for Sports Safety PREPARE. Pop Warner requires that a player safety coach be nominated and trained through the USA Football Heads Up Football Program for each organization.

Many of the requirements are a step toward improving the health and safety of the athletes; however, this basic medical training provides a minimum safety standard and is not designed to train the coaching staff to appropriately respond to an injury. Additionally, several youth football organizations that are community-based and do not fall under the jurisdiction and guidance of the nationally recognized programs that require, or recommend, the safety resources mentioned above.

Previous studies have demonstrated the benefits of the presence of a medical professional at youth and high school sporting events. These studies have shown that the presence of a medical professional improves the identification of concussion and may subsequently reduce the number of concussions that are not reported or missed.<sup>8,9</sup>

From Wake Forest University School of Medicine, Winston-Salem, North Carolina (JEU, EKC, JDS, DAR); Department of Biomedical Engineering, Winston-Salem, North Carolina (JEU, JDS); Department of Family and Community Medicine, Winston-Salem, North Carolina (EKC, DAR); Innovative Athletic Training, LLC, Greensboro, North Carolina (MK); University of North Carolina at Chapel Hill, Chapel Hill, North Carolina (JKR-M, JPM); Matthew Gfeller Sport-Related Traumatic Brain Injury Research Center, Chapel Hill, North Carolina (JKR-M, JPM); Department of Exercise and Sport Science, Chapel Hill, North Carolina (JKR-M, JPM).

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Correspondence: Jillian E. Urban, PhD, Department of Biomedical Engineering, Wake Forest School of Medicine, Medical Center Blvd., Winston-Salem, NC 27157. E-mail: jurban@wakehealth.edu

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It is standard to have a certified athletic trainer at all collegiate and professional levels of football. However, a recent study reported that 70% of high schools have some access to an athletic trainer, but only 37% have a full-time athletic trainer and there are few youth-level organizations that have access to an athletic trainer.<sup>10</sup>

During the 2013 and 2014 football seasons, our group worked with a youth football organization to hire an athletic trainer for practices and games. In this article, we report the feasibility and potential benefits concerning emergency treatment, recognition of injury, and awareness of the importance of safety procedures by way of an anecdotal report of our experience for the 2013 and 2014 seasons. The objective of this report is to document two seasons of experience with a full-time athletic trainer working with a single youth football organization of more than 170 players. This report may inform youth sports leaders and sports safety advocates about the challenges and benefits of having an athletic trainer in a youth football organization.

#### CREATING AND FUNDING THE POSITION

A 2011 pilot study was conducted by the Virginia Tech–Wake Forest School of Biomedical Engineering evaluating head impact exposure in seven 7- to 8-year-old football players in Blacksburg, Virginia. Athletes wore accelerometers in their helmets for one season, which showed that youth athletes received head impacts that were similar in magnitude and frequency to those occurring in high school and college players.<sup>11</sup> In 2012, our group received a grant from the Childress

Institute for Pediatric Trauma to expand upon this research and include advanced brain imaging pre-season, post-concussion (if one should occur), and post-season. A local youth football organization competing under the guidelines of American Youth Football agreed to participate. The investigation team believed that the presence of an athletic trainer at the practices and games was necessary because the study protocol required recognition of potential concussion injuries. This was chosen as a reliable alternative to relying on reports of coaches, parents, or parental volunteers with health care backgrounds but inconsistent presence.

In the inaugural season, a position description was distributed to the local North Carolina university athletic training programs, North Carolina Athletic Trainers' Association Facebook and Twitter pages, and to professional references provided by colleagues. There was initial difficulty in finding interested candidates for the position, primarily because it would be a part-time position given the number of hours needed during the 3- or 4-month season (approximately 18 to 20 hours per week); however, the position was eventually filled. At a rate of \$35/hour, the resulting cost was \$7,500 for the season. This cost included athletic trainer coverage, liability insurance coverage, and supplies because the person was employed by the youth organization rather than through the hospital. The youth organization funded 40% of the position, with substantial financial support from a local charitable foundation.

In the following season (2014), our team believed that it was necessary to make this a full-time

position for a 6-month contract to attract a candidate with the time availability and commitment throughout the season. It was estimated that 50% of the position would be devoted to on-field duties and 50% to outreach (occasional isolated high school event coverage) and assistance in the Sports Medicine Clinic (eg, rooming patients, demonstrating home exercises, and applying braces). A position was created through the Department of Sports Medicine at Wake Forest Baptist Health and at a hospital-defined 6-month salary of \$16,328. The total cost to fund the athletic trainer full-time for the length of the employment during football season (with 50% effort devoted to coverage of the youth organization) was \$8,187. The funding for this position was made possible through contributions from the youth organization, grant funding, a charitable donation, and internal departmental funds. During each of the seasons, a licensed Sports Medicine physician signed off on orders. There was no cost to the program for the physician and it was a necessary component to having an athletic trainer on field.

#### THE ATHLETIC TRAINER'S EXPERIENCE

One athletic trainer was hired for each of the fall football seasons during 2013 and 2014. In this youth organization, players were aged 6 to 13 years old. Five teams, with 20 to 30 players per team, practiced on separate areas of one football field and two additional teams practiced 2 miles away at a local park. Each team practiced three nights per week, with approximately two full-contact practices per week. The athletic trainer operated primarily

**TABLE 1**  
**Injuries Assessed by the Certified Athletic Trainer in Two Seasons of Youth Football<sup>a</sup>**

Injuries	Home Organization		Other Teams	
	2013	2014	2013	2014
Concussions (out of play)	4	4	6	7
Fractures	2	3	5	1
Neck/spine (required boarding)	3	0	11	4
Medical (EMS activated)	1	0	2	5
Dislocations	2	0	0	0
Contusions	10	0	0	0
Sprains	3	3	2	2
Heat-related illness	0	4	0	0
Totals	25	14	26	19

EMS = emergency medical services

<sup>a</sup>Injuries were only counted if presented to the athletic trainer.

from the main practice field and was on-call for the teams practicing at the remote field. The athletic trainer split time on-field between practices (6 to 8 hours/week) and games (8 to 9 hours/week) throughout the season. The athletic trainer sat at the same location on the sidelines of the practice field with a view of the teams during each practice and would stand along the sidelines with the team that was playing during each game. Game days in this league consisted of six to seven games running back-to-back, with the youngest teams playing in the morning and the oldest teams playing in the afternoon. The athletic trainer suggested steps to make the playing environment safer, such as creating an emergency action plan and assisting individual players with conditioning, stretching, hydration tips, and other topics, in addition to assessing injuries. The athletic trainer served as an injury prevention and safety resource to the organization, including the parents, athletes, and coaches, and was available for one-on-one advisement, demonstration, and education when deemed appropriate.

### 2013 Season

Prior to the 2013 season, referees, coaches, parents, and league representatives managed injuries. For the first time in the history of American Youth Football in North Carolina, a paid and trained medical professional was assigned to the management of youth football injuries. Over the 15-week season, the athletic trainer attended 45 practices and 10 game days (approximately 6 to 7 games per game day, 1 to 1.5 hours each game). While on duty, the athletic trainer assessed roughly equal numbers of injuries in the home and opposing teams (Table 1). The injuries assessed ranged from minor contusions and sprains to fractures and concussions. One concussion resulted in the athletic trainer and physician recommending that the athlete sit out for the remainder of the season.

The athletic trainer started on the first day of regular season practice. The first 2 weeks were an adaptation period for the athletic trainer to get to know coaches and educate them about her training and skills through business

and information cards describing her role. As the season progressed, the athletic trainer found it critical to create relationships with the coaches of both teams and the game officials. On game day, she introduced herself, gave coaches and officials an information card describing her role, and advised that she be waved onto the field for significant injuries. However, when a serious injury occurred, family members and fellow parents often came onto the field as well. There was no injury action plan in place to outline crowd management responsibilities, which complicated the athletic trainer's ability to assess the injured athlete. There was also confusion regarding her role when an opposing player was injured. The athletic trainer felt professionally obligated to assist in these situations, but coaches and parents occasionally resisted. This confusion was likely due to the novelty of actually having a medical provider on site at this level of play, and improved over the course of the season as the coaches, parents, and players gained a better understanding of the athletic trainer's role on field.

**TABLE 2**  
**Recommendations for Success<sup>a</sup>**

Seek funding through the youth organization and/or local supporting stakeholders (ie, charitable organizations, raised registration fees, or local business sponsors).

Hire the athletic trainer through an organization (ie, hospital system), which might provide support for liability coverage and supplies.

Identify a local sports medicine physician(s) partner to support the athletic trainer and sign off on orders.

Establish a working relationship between the youth organization and athletic trainer prior to the start of the season and engage in group development of the emergency action plan and additional safety policies (eg, injury follow-up).

Introduce the athletic trainer and clearly communicate his/her role to the home organization (coaches, parents, and players) and the league (referees and opposing team coaches, parents, and players).

Integrate the athletic trainer into the organization's culture.

<sup>a</sup>Data adapted from Urban JE. Athletic trainers key for youth sports. Childress Institute for Pediatric Trauma website. <https://saveinjuredkids.org/blog/athletic-trainers-key-for-youth-sports-safety/>. 2015.

**2014 Season**

During the 14-week season in 2014, a new athletic trainer was hired 3 weeks into the start of pre-season practice and 1 week prior to the first game. This was partially due to delays in identification of candidates and completion of new employee orientation. The athletic trainer attended 36 practices and 12 game days. In this season, some teams were split between multiple fields on game days due to low enrollment at opposing organizations. Thus, the athletic trainer needed to prioritize which games to attend; this often resulted in the older team having athletic trainer coverage rather than the younger team. In this season, fewer injuries were noted than in 2013 for both home and opposing teams (Table 1).

Overall, the second season with a full-time athletic trainer at the youth level was positive. The organization placed increased emphasis on practicing tackling and blocking techniques and cardiovascular conditioning, which may have been partially responsible for the lower

injury incidence compared to other teams (Table 1). However, on more than one occasion, the athletic trainer was compelled to cite the Gfeller-Waller Concussion Law to explain to parents why their son was not allowed to return-to-play. Although this law does not specifically include youth athletes, it does provide a best practice standard for concussion management.

**YOUTH FOOTBALL ORGANIZATION'S PERSPECTIVE**

The youth organization board members believed that providing an athletic trainer made a clear statement about their organization's commitment to player health and safety. Overall, the organization enthusiastically supported continuing their association with the athletic trainer and had several suggestions. The board suggested that the athletic trainer hold a pre-season educational clinic for parents. It was recommended that the athletic trainer assume responsibility for the emergency action plan and coordinate a required safety training session for coaches. The

board felt that formally introducing the athletic trainer to the league would help define working relationships with other associations and league officials. This working relationship could lead to the development of on-field injury assessment protocols, in conjunction with local emergency medical services. The board identified cost as a major challenge and suggested paying the athletic trainer by the day rather than hourly to more easily plan a budget. After the first season, the board president stated, "Ask the [charitable foundation] to again contribute. We certainly could not fund this on our own."

**CHALLENGES**

There were challenges to implementing this program. Prior to the first season, it was difficult to find an athletic trainer interested in a seasonal part-time position. To make this position more attractive in the second season, it was made a full-time 6-month position with the associated medical center identifying and compensating for additional clinical duties. Six candidates subsequently applied within 2 weeks.

Controlling the activity of players restricted from participation due to injury, especially those recovering from concussions, was difficult because the athletic trainer was responsible for monitoring teams practicing simultaneously on multiple fields. Players rarely followed up with the athletic trainer after an injury, so the athletic trainer relied heavily on coaches to update her on the status of players at the beginning of each practice. Resistance to return-to-play management was observed, particularly in the case of concussion management. Although

there have been recent efforts to educate parents and coaches on concussion awareness, this observation highlights that parents and coaches may not fully understand the importance of proper injury management, which can be provided by an athletic trainer.

Game days were long, making fatigue a factor for the single athletic trainer. Initially, the lack of a cohesive emergency action plan sometimes complicated the athletic trainer's ability to work with injured players because there was no plan in place when the athletic trainer began the position. However, this improved in the second season because the athletic trainer was actively involved in the development and execution of the plan.

A potential barrier to implementing a full-time or part-time athletic trainer in a youth football league is expense. A less costly alternative would be to hire an athletic trainer only for game days. However, in addition to loss of practice coverage and resulting fragmented care, there would be less opportunity for the athletic trainer to educate coaches, players, and parents on specific health and safety issues. It also would be more difficult for the athletic trainer to integrate into the organizational culture as a member with a respected role who is able to affect system improvements.

## CONCLUSIONS

The objective of this report was to document two seasons of experience with a full-time athletic trainer working with a single youth football organization of more than 170 players. Recommendations for successfully implementing an athletic trainer at the youth level are provided in **Table 2**. Overall, proper introduction of the athletic trainer to all parents, coaches, and game officials was vital to successful integration of the athletic trainer into this environment. Most of the injuries observed were minor; however, the emergency action plan was activated eight times over the two seasons. In our experience over the two football seasons, a youth football organization found significant value in having an athletic trainer present at most practices and games. Cost was a major obstacle and required assistance from charitable foundations, although funding from raised registration fees or local business sponsors was not explored. Otherwise, this plan for youth football organizations is feasible, appreciated by parents, and may enhance player safety through improved injury awareness, prevention, and assessment.

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