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Fan Safety at Sports Facilities

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Fan Safety at Sports Facilities

Will facility managers of major sports venues continue to stand by as fans are hurt or die while attending games? Fan accidents continue to happen, and facility managers of major sports venues find themselves in a difficult position. Either they upgrade their already above average safety standards to further protect fans and possibly reduce the fan experience that brings the fans to their sports facilities or they do not upgrade and face the possibility that the number of fan accidents will increase (Lavigne, 2011). The focus of this research is to study the types of accidents that cause injuries to fans, the reactions of facility managers to fan accidents, the possible solutions to prevent these accidents, and the opinions from facility managers concerning elimination of the assumption of risk rule. It is important to consider all these items in order to find ways to provide safe, yet exciting sports experiences to fans.

There are a variety of fan accidents that occur at major sports events (Augustine, 2008). Consideration is given to the types of fan accidents and possible solutions to prevent future accidents. As someone is responsible for spectator accidents, discussion concerning liability for these accidents, liability laws pertaining to these types of accidents, and court cases with results of those who sought accountability for these accidents needs to continue (Augustine, 2008). Facility managers will need to look at the types of accidents so that particular solutions can be found for each type of accident.

One of the reasons sports fans attend games is to take home a souvenir, especially one that is delivered from a player on the field (Brown, Baggarly, & Stiglich, 2011). In baseball, fans arrive at the stadiums with baseball gloves in hopes of catching a foul or home run ball. When reaching for souvenirs that are thrown or hit, fans need to be aware of railing heights and brace themselves when reaching for a ball to prevent falling out of the stands. If safety measures
are taken by facility owners to increase fan safety, their actions could result in reducing the fan experience. Fans may then decide that attending games is not as much fun which may lead them to remain home and watch games and sporting events on television. This puts facility managers in a “catch 22” position. If they install new safety measures and fans cannot see the game or interact with players, fan attendance could be at stake.

**Literature Review**

Literary sources show that fan accidents occur during and after games at a variety of sports venues as a result of flying objects, falls, or mismanagement by facility managers. Baseball spectators are injured as a result of being hit by foul balls and broken baseball bats (Winslow & Goldstein, 2009). They are also injured or killed after falling out of the stands in Major League Baseball stadiums. These types of accidents are not uncommon (Perez, 2011). Although baseball appears to be the sport most reported about in regards to fan accidents, other sports should be included when addressing spectator accidents. Hockey fans incur injuries from deflected pucks (Wakamatsu, 2009). Spectators attending National Association for Stock Car Auto Racing (NASCAR) events can also be hit by projectiles, e.g., cars, tires, and auto parts (O’Roark & Wood, 2004). Golf spectators are subject to errant golf balls, carts that overturn, thrown clubs, and reckless golf swings (DeVoto, 1993). Falls off escalators have occurred at several sporting venues (Steinbach, 2008). Research found there are safety concerns regarding these types of accidents and also regarding mismanagement by stadium personnel when they allow overcrowding to occur as result of selling more tickets than is safe for the size of the facility (Alegi, 2004). When lightning is in the area presenting a safety concern and venues should be evacuated, there have been venue managers who have chosen not to provide fans with
direction and instruction to ensure their safety (Gratz & Noble, 2006). The type of risk present should present specific solutions.

**Accidents During Sporting Events**

Foul balls have always been a threat to baseball spectators. According to the article “Spectator Risks at Sporting Events,” there are 35.1 injuries per million spectators from foul balls at Major League Baseball (MLB) games (Winslow & Goldstein, 2009). When baseballs leave the playing field, they usually enter the spectator areas behind home plate and down the first and third baselines. The baseballs are fast flying projectiles and usually cause injuries to the face and head of spectators. Another type of flying projectile that injures baseball spectators are maple wood bats. They do not just break; they explode (Passan, 2008). Broken bats pose a credible threat to fans. As they break, pieces fly everywhere, fast and dangerous. Not only fans but base coaches and umpires are being hit by flying pieces of broken baseball bats (Ladd, n.d). Projectiles continue to be a concern for fan safety at baseball venues.

Several incidents of fans falling over railings at MLB ballparks have occurred in 2010 and 2011. Writer Chris Cox (2010) describes the fall of a male Ranger fan from the second deck club level at Rangers Ballpark in July of 2010. The fan fell thirty feet as he turned away from the field trying to catch a foul ball and flipped over a railing and landed on his back. Four other fans suffered minor injuries when he fell on top on them (Cox, 2010). One year later in the same stadium another fan, Shannon Stone, fell over a railing trying to catch a ball that outfielder Josh Hamilton tossed toward the stands. Stone died as a result of his injuries (Perez, 2011). Stone’s death was the second fatal fall at a MLB stadium in 2011. The other occurred in May at a Colorado Rockies game when a man fell 20 feet and hit his head on concrete (Perez, 2011). Although three fans falling out of the stands within a year are hard to believe, it is not that
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uncommon according to Fox Sports reporter A.J. Perez (2011). He goes on to list fan accidents from falling. When Rangers Ballpark opened in 1994, a woman fell 35 feet breaking several bones and sustaining multiple neck fractures. Other fan injuries from falls at sports venues include: a fan death at a Giants game in 2003 at Pac Bell Park in San Francisco; a man injured in 2009 when he attended a game at Busch Stadium in St. Louis where he fell out of an upper deck; in 2010 a man at a LSU football game, after drinking too much alcohol, fell out of the upper deck at Tiger Stadium injuring not only himself but also another fan; a fan died after falling 20 feet during a professional football game at Soldier Field in Chicago; and last year a two-year old boy at a Lakers Basketball game fell between thirty and fifty feet from a luxury box and died (Perez, 2011). Looking at the list of spectator injuries and deaths, especially in regards to falls from stadium decks; rising fans’ safety concerns are real. Daniel Brown, Andrew Baggarly and Joe Stiglich discuss in their article, “Focus in on safety at major league parks in wake of fan’s death,” outfielder Aaron Rowand of the Giants and his plan when tossing a ball to the fans. They tell when Rowand is finished with his warm-up throws between innings; he tosses a ball into the middle of the crowd in the stands. They continue saying, although it appears to be a casual toss, Rowand makes a deliberate and planned throw so that a fan does not have to reach over the railing to catch a ball. MLB players are encouraged to interact with the fans by tossing baseballs into the stands (Brown, Baggarly, & Stiglich, 2011). It would seem that facility managers need to react to these concerns and consider possible solutions, but some possible solutions could reduce the fan experience and fan attendance at games and sports events.

Further exploration shows fan accidents also occur in other sports. Flying pucks injure hockey fans. Although pucks are supposed to glide across the ice, they become flying projectiles when they are deflected off the sides of a hockey rink. Aaron Wakamatsu (2009), author of an
article in the *Willamette Sports Law Journal*, states that it is more difficult to get out of the way of a hockey puck than it is to get out of the way of a foul ball. He says it is harder to see a puck in an arena than it is to see a baseball in a ballpark. He goes on to say hockey is played inside so the lighting is not as good as it is at a baseball field which is well lit. A hockey puck is black making it harder to see than a white baseball. He gives one last reason why hockey presents a greater danger than baseball. A hockey rink is smaller than a baseball field making the distance the puck travels from deflection off the side of the hockey rink to impact on a spectator’s head or face shorter than a foul or home run baseball has to travel from off the bat to impact (Wakamatsu, 2009).

According to J. Brian O’Roark and William C. Wood (2004) of James Madison University, flying projectiles are also a concern at NASCAR events. They relate the details of an accident at Talladega Superspeedway in Alabama. Stock car driver Bobby Allison’s car blew a tire causing his car to become airborne. Traveling at a high rate of speed, the car demolished a whole section of safety fence and almost entered an area crowded with spectators. Car fragments were flying in many different directions and severely injured a number of fans.

Louis J. DeVoto (1993), in an article for *The University of Toledo Law Review*, discusses golf course related injuries that can happen to players, caddies, spectators, passing motorists, and possibly nearby homeowners, usually by an errant golf ball. If a player hits a golf ball and it appears to be going in the direction of people who are unaware, he/she has an obligation to warn them of the incoming ball. Golfers usually do this by shouting, “Fore.” Reckless golf swings also cause accidents on the golf course and most times occur within the group of players. However, clubs have flown out of a player’s hands when swinging causing injury to others. DeVoto continues discussing golf course related accidents declaring some unusual accidents.
involving golf carts and young children on the golf course (1993). The research shows fan accidents are possible in a variety of sports, and facility managers will need to look at incidents such as these to determine what solution will work best for each particular type of accident.

**Accidents at Sports Facilities**

Not all accidents occur during the course of play of a game. Other types of accidents are common in other areas of facilities. Major League Baseball (MLB) fans are falling off escalators as they try to slide down on the rails. Two men have died as a result—one from New York and one from Atlanta, a month apart (Miller, 2008). In his article, “The Rise and Falls of the Stadium Escalator,” Paul Steinbach (2008) writes about several spectator accidents in sports stadiums. Two escalator accidents occurred at Giants Stadium when the escalator sped up and then stopped throwing people down the stairs of the escalator. Just the opposite happened at Colorado Rockies Coors Field. The escalator stopped and then sped up injuring one lady so severely that her leg had to be amputated (Steinbach, 2008). As a result of this and other escalator accidents at various baseball stadiums, spectators at the new Mets stadium were offered the option of either riding escalators or using elevators to get to their seats (Steinbach, 2008). Stadium officials reacted to the escalator issue, and presented fans with a possible safer alternative.

Another type of spectator accident occurred at a soccer game between two major teams. The stadium was overcrowded causing 43 people to fall, be trampled and die (Alegi, 2004). In an article written by Dominic Elliot and Denis Smith (1993) of the *Industrial and Environmental Crisis Quarterly*, four disasters were described in which 250 spectators were killed. These happened at football/soccer events in Great Britain because of the greed of the facility managers who allowed the stadiums to be filled beyond recommended capacities. The first accident was at
the Ibrox Stadium in Glasgow where as a great number of fans were exiting the stadium, many fell and were trampled. The result was 66 deaths and 140 injured. Another one occurred at Bradford in the form of fire. Fans trying to leave the stadium became trapped at locked exits and perished (Elliott & Smith, 1993). The next one was two weeks later at Heysel. Thirty eight victims died as a result of being trampled or from suffocation as one of the walls of the stadium collapsed. The fourth accident occurred at Hillsborough in 1989. Fans were trying to get into the stadium as some were leaving because of overcrowding causing a crush. Seventy-six people died and 766 were injured making this the worst sports fans disaster in history. Spectator safety in large stadiums is not only a British issue; it is a global issue—wherever spectators attend sports events (Elliott & Smith, 1993).

The article, “Lightning Safety and Large Stadiums” by Joel Gratz and Erick Noble (2006), discusses spectator safety when lightening is in the area of large stadiums. A particular incident occurred at a college game when lightning surrounded the stadium. It was announced over the PA system that the game was suspended and all players, coaches, and stadium personnel left the field. No instruction or assistance was offered to spectators to protect them from the lightning. The list of types and incidents of fan accidents that happen at sports venues is extensive which warrants continuing research on the subject in order to discover how facility managers react to and answer safety concerns.

**Protecting Fans from Accidents**

Additional research generated possible solutions for facility managers regarding prevention of fan accidents at their facilities. Mohit Khare (2010), writing for the *Texas Review of Entertainment & Sports Law*, addresses the minimum standard of protection for spectators from foul balls as set forth by the courts in the *Atkins v. Glen Falls City School District* case.
Stadium owners need only to install screening in the most dangerous area in the ballpark which is behind home plate even though foul balls hit spectators in other sections of the ballpark. Attorney Ted Tierney (1998) argues for a proposed law that would force stadium owners to increase the amount of netting to cover all the dangerous areas in the ballpark, additional warnings to new spectators/fans with more signs and public address system announcements, and to limit the sideshows that now go on when a game is in progress to only the periods of time between innings. This proposal addresses safety concerns and offers possible solutions that may be of interest to facility managers for prevention of fan accidents.

Research shows that two professional sports responded to fan safety issues better than others. The National Hockey League (NHL) provided fan protection against being hit by deflected hockey pucks by installing 5ft. Plexiglas screens around the ice rink with netting from the top of screen to the ceiling (Winslow & Goldstein, 2009). After stock car driver Bobby Allison blew a tire which forced his car to become airborne and hurl car fragments towards the spectators, NASCAR officials reacted quickly and employed a plan to reduce the speed of the race cars by mandating the use of restrictor plates. Although the drivers feel this puts them at risk, NASCAR has been adamant about continued use of the restrictor plates in order to protect the fans (O’Roark & Wood, 2004).

Railing height requirements, building codes and city “life safety” inspections received immediate attention from facility owners and MLB in response to the falls and deaths of fans attempting to catch a baseball during games in 2010 and 2011. Railings heights at MLB baseball parks are in compliance with the requirements and codes, but they are obviously not high enough to protect some of the fans from falling over them as they try to catch thrown balls, foul balls or home run balls. According to Paula Lavigne (2011) of ESPN.com, fan reaction is mixed
regarding raising the height of stadium railings as management at MLB ballparks seeks answers to fan safety concerns. Reactions are split on Texas Rangers management’s decision to raise all front-row railings from 33 inches to 42 inches. A fan, Ronnie Hargis, who tried to grab Shannon Stone as he fell, feels the railings are fine, and if they are raised people will try to stand on top of railings or crawl up the railings to get a ball. He went on to say people need to be aware of their surroundings (Lavigne, 2011). This observation is in line with the way facility managers look at accountability for fan accidents.

Although each crisis has been addressed in regards to the four disasters at football/soccer venues in the United Kingdom, the results have been focused on technical solutions related to space issues instead of pro-active programs for prevention through change—a before the disaster view as opposed to an after the disaster has occurred point of view. This produced a fragmented result which presents its own problems, e.g., inaccurate reports of spectator movement and aisle widths. As a result, any change to promote fan safety has moved slowly (Elliott & Smith, 1993). Upon review of the research involving possible solutions for facility managers to implement at their venues, it appears there are legitimate options to improve fan safety.

**Legal Liability in Fan Safety**

Assumption of risk is known as “the baseball rule.” It protects ballpark owners from injury lawsuits. According to this rule, the dangers that are a part of baseball are known to its fans. Therefore, fans assume those risks when they choose to attend a game (Gorman, 2010). Assumption of risk is also used in liability cases involving other sports, e.g., hockey, golf, and sports car racing.

Leigh Augustine (2008) practices law in the sports, entertainment, and intellectual property fields. He also teaches Sports Law at the University of Denver. In his article, the author
asks and answers the question of the law’s position on liability in regards to spectator injuries. His answer states the law sides with the teams, leagues, and event promoters. Thus, all liability is placed on the spectator under the inherent danger of attending a sporting event rule. His answer led to reading a discussion by Robert Clifford (1993) concerning the Baseball Facility Liability Act and the two cases that led to passage of this law in 1993. Both cases involved spectators that were hit by foul balls and recovered damages through court action. This law exchanged the reasonable care and comparative negligence doctrines with the assumption of risk doctrine, which protects the stadium owners, the ball clubs, and the players but not the fans that pay to attend the games. An important point of this law was also discussed by Clifford (1993): insurance premiums fund the tort system. The real winners of this law were the club owners because the cost of their liability premiums were reduced which provided more money to pay high salaries and bonuses to the players with no responsibility for negligence (Clifford, 1993). Another issue that has arisen in current times is known as the “Distraction Theory” (Fried & Ammon, 2002). They state in order to market baseball; activities other than baseball take place while a baseball game is in progress. These activities could not only distract fans but also the vendors who are conducting the activities. This theory could lead to a change of the assumption of risk rule because the distractions provided for spectators as part of MLB marketing strategies could lead to more spectator accidents (Fried & Ammon, 2002).

In an article published by David Horton (2003), safety measures at sports venues were discussed. Measures talked about included increasing railing heights, eliminating throwing baseballs to the fans in the stands by the players during games, and installing netting throughout sports venues. Also discussed were unsuccessful claims of injured spectators; a Supreme Court decision regarding assumption of risk, and duty of reasonable care. Instead of the limited duty of
the “baseball rule,” duty of reasonable care would mandate stadium owners to agree to safety installations relative to the particular ways spectators are injured and to update warnings and safety measures as technology changes. It would appear it is necessary for stadium owners to accept more responsibility for spectator safety and to employ the means to accomplish it (Horton, 2003).

In light of accidents suffered by fans, some feel that MLB should consider conducting a complete review of safety guidelines at all MLB ballparks and stadiums. MLB does encourage its teams to review their own safety guidelines, but Baseball Commissioner Bud Selig does not plan on mandating any major changes to safety rules at its ballparks and stadiums. Commissioner Selig stated in an article regarding MLB safety rules that fans should use common sense when reaching for a ball. They need to be aware of their surroundings and take responsibility for their safety (“Should MLB review,” 2011). In this article, Selig describes MLB’s position on fan safety—assumption of risk/baseball rule.

Andrew Pittman relates that for close to 100 years courts have ruled against baseball spectators who have been hit by foul or fair balls (2007). He talks about two cases that involved spectators being hit by a ball while purchasing tickets to the game and buying something at a concession stand. The courts ruled in favor of the injured spectators because these actions were not considered an inherent risk of the game of baseball. He discussed two other cases that occurred in areas where foul balls were routinely hit so there was an assumption of risk by the spectators. If the burden of liability changes, facility managers will be forced to react by implementing safety measures above and beyond what is already required by local building codes.
If facility managers are mandated to improve the safety measures they already have in place because of a change to the liability laws, particularly the assumption of risk or baseball rule, they are incurring expenses to accomplish the new safety measures. These expenses will, most likely, be passed on to the consumer. The new safety features may keep fans safe but may prevent them from enjoying the game or event as much.

Fan accidents continue to happen and the search for solutions to prevent them without taking the fans out of the game provide reasons for continued research on the subject of fan safety. In order to do this, reactions from facility managers regarding their reactions and what they think fan reactions might be need to be studied. This research will attempt to answer the following questions.

1. What is the reaction of facility managers to fan accidents at sports venues?
2. What recommendations do facility managers suggest to address safety concerns at their facilities?
3. What reactions have facility managers heard from customers regarding fan accidents at sports venues?
4. What recommendations have facility managers heard from customers regarding safety concerns at sports facilities?
5. How do facility managers think fans will react to improved safety measures that could possibly remove them from the live action of the game?
6. Do facility managers think the assumption of risk or baseball rule will be eliminated?
7. Have facility managers installed any new safety measures in their facilities during the past year?
Method

Participants

Participants for this study included area sport facility managers. The Rochester area has many sport facilities, some of which are home to professional sports teams. Some of these facilities include Frontier Field—Rochester Red Wings Baseball team; Rochester Blue Cross Arena—Rochester Knighthawks—Lacrosse; Rochester Americans—Hockey; Rochester RazorSharks—Basketball; and Paetec Park—Rochester Rhinos Soccer team (“Sports Teams,” 2006). Other facilities include indoor sport and recreation centers, athletic clubs, ice rinks, and health and spa centers (see Table A1). This list of Rochester area sports facilities, their locations, sports played and seating capacity were obtained online at the Monroe County Sports Commission website. This website listed different types of facilities including baseball, hockey and golf (“Facilities,” n.d.). There were no responses to the Qualtrics survey but seven responded through regular mail.

Materials and Procedures

An electronic e-mail cover letter and survey questionnaire were created (see Appendices B and C) and distributed to area sports facility managers through Qualtrics. A paper cover letter was also created (see Appendix D) and along with the survey sent to area sports facility managers via regular mail. The survey questionnaire was used because, in sport-related research, it is the method used most frequently by researchers (Gratton & Jones, 2010).

Distribution of the surveys through Qualtrics and regular mail occurred. Excel was used to record, calculate, and analyze the data collected from the surveys. It was also used to create tables, graphs, and charts to display the data. See Table E1 for a summary of the specific sport, the types of accidents, safety measures now in place, and suggested safety measures for the future using information found in online sources and presented in the literature review.
Results

Survey results are limited as a result of the number of responses received. Surveys sent electronically through Qualtrics yielded no responses. Seven out of the 11 surveys sent through the mail were returned, providing a response rate of 64%.

Respondents could choose several answers to type of facility (see Table F1). Recreational facilities were chosen the most while professional sports venues were chosen the least. This makes sense in that many more people are involved in amateur sports compared to professional sports. Fitness centers were chosen in the same responses that selected recreational facilities. Event venues were chosen in both recreational and professional facilities. The major differences between recreational and professional venues were seating capacity and whether participants were professional athletes.

Respondents to the survey showed all had been in facility operations more than 5 years and three out of the seven had been for more than 20 years (see Table G1). Their ages ranged from older than 20 to over 60 years old (see Table G2). All were college graduates with bachelor’s degrees and three of them had master’s degrees. Business was the most prominent major as compared to marketing, social sciences, and athletic administration (see Table G3).

Facility managers gave several different answers to the question asking their reaction to fan accidents at sport venues. Several managers responded that when they hear about fan accidents their first thought is about preventing them at their facilities. Others felt fans should be aware of dangers associated with the sports events they are attending. One manager felt alcohol causes many accidents that occur at sport facilities and another felt accidents do happen but for the most part sports venues are safe.
All respondents did not answer this portion of the survey. Only six of them did, thus 67% of those facility managers are in favor of increasing the height of railings in sports venues in order to prevent fans from falling out of the stands (see Table H1). However, 83% of them are not in favor of installing netting throughout stadiums for the same purpose and to also protect fans from being hit by projectiles. Facility managers reported that in the past year they did not install many new safety measures. For some, the only installation was netting and for others it was more about servicing and repairing existing safety mechanisms. When they responded to elimination of the assumption of risk or “baseball rule” which removes liability from facility owners, 83% answered that they thought the rule would not be eliminated while 17% were unsure (see Table H1).

Customers do voice their opinions to facility managers regarding safety at sports venues (see Table I1). They did not appear concerned about railing heights being too low in sport facilities or that there was not enough netting to prevent them from falling out of the stands as there was no responses to these items. Some were concerned about being hit by projectiles because there was not enough netting to protect them. The item most selected was other which covered safety concerns such as broken equipment, facility damage, and icy sidewalks. Facility managers reported most of their customers did not feel that installation of higher railings or more netting would remove them from the live action of the game.

The last question of the survey asked facility managers if they would like to make any additional comments. Most comments concerned proactive approaches to safety hazards and fan awareness of safety dangers at sports venues. Facility managers felt they along with their staff must constantly be looking at and around their facilities for potential safety issues and to take care of them as soon as they are discovered. On the issue of fan safety at sports venues, it was
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felt accidents occurred more because of fan carelessness rather than unsafe facilities. Facility managers reported fans must assume responsibility and be aware of possible dangers.

**Discussion**

The focus of this research was to study the types of accidents that injure fans, the reactions to fan accidents by facility managers, suggestions to prevent fan accidents, and facility managers’ thoughts concerning elimination of the assumption of risk rule. All these issues and the seven research questions were addressed by the facility managers that responded to the survey.

The responses from facility managers showed that although most favored raising railing heights they did not favor installing netting, both of which are meant to help prevent fans/spectators from falling out of stands or being hit by projectiles. It is assumed from reading the literature review that all facilities are in compliance with local building codes. Therefore, it seems that both facility managers and their customers in the Rochester area feel their facilities are safe. If new safety mechanisms were installed, the cost would most likely be passed on to their customers. Installation of higher railings and additional netting could impair the fans’ ability to see the games thus removing them from the live action of the game. As a result, the fans might consider the cost of attending the sporting event not worth this type of experience and choose to stay home and watch it on television.

Recreational and professional are the two major types of facilities. There are more recreational venues than professional venues because there are more amateurs involved in sports than professionals. Both types have indoor and outdoor sports, both hold sporting events and concerts, but fitness centers are recreational and seating capacity is larger in professional venues. More revenue is generated from professional venues because of larger seating capacities, star
players and performers, and from ticket, concession, and vendor sales. The chances of more accidents occurring at professional venues are possible in that fans want souvenirs from the star players and put themselves in danger to obtain one. Many times, the fans are not paying attention to their surroundings and this puts them in danger of being hit by projectiles. Although sports facilities meet safety codes, fans must take responsibility for their own safety

Customers do talk to facility owners/managers about safety concerns but they appear more concerned about things other than higher railings or netting to protect them. One of the concerns expressed at the beginning of this research was removal of fans from the live experience of games if higher railings and more netting were installed at sports venues. However, respondents to the survey responded that if these mechanisms were installed they do not feel that they would be removed from the live action of the game.

Survey results also show most facility managers are concerned with preventing accidents and use proactive approaches to discover potential dangers. Potential dangers are corrected immediately. Although most managers did not install new safety measures within the last year, they continually service and repair the existing ones. These actions are risk management procedures, and when used in sport and recreation they unite the usual business interest of limiting financial risk with the interest of the sport and recreation industries which is to supply increased customer/fan safety (Ammon, 2003). If the number of injuries to participants or guests decreases, the industries can reduce their financial risk (Ammon, 2003). A good risk management plan then diminishes the chances for lawsuits.

According to Robin Ammon, Jr. (2003), the D.I.M. process was created as a way to develop a good risk management program. He goes on to say that it is a simple process involving three basic steps:
1. Developing the risk management plan.
2. Implementing the risk management plan.
3. Managing the risk management plan.

He continues with stating that a risk management plan is necessary for all business, industries, companies, etc., and it should be specific to that particular organization. A plan that works for one company would not necessarily work well for another. However, the steps to forming the plan will be comparable for any type of organization (297). Facility managers will all use the same basic principles. When the D.I.M. process is used before an accident or situation occurs rather than after the fact, it will reduce the chance of legal proceedings (Ammon 2003). Facility managers did not feel the assumption of risk rule would be eliminated which means fans must be aware of safety hazards at sporting events and accept responsibility for their own safety.

**Limitations and Future Research**

Because the response to the survey was limited, further studies into fan safety at sports facilities should be implemented. Additional research should include facility managers at major league professional venues as fan accidents that occur at these types of facilities are the ones most publicized. Also, fans/customers of these venues should be surveyed for their opinions regarding fan accidents, existing safety measures, and solutions that address the causes of fan accidents. Surveying and interviewing these facility managers and fans will expand the research to include others that work at and attend sports facilities.

Fan accidents continue to occur at sports facilities. Both facility managers and fans are responsible for fan safety. Facility managers must comply with local building codes, such as railing heights, seating capacity, etc. Fans must be more aware of their surroundings and
possible dangers. Future research is warranted in order to do all that is possible to ensure the safety of the fans/customers and their enjoyment of the sporting event experience.
References


Appendix A

Table 1

*Rochester Area Sports Facilities*

<table>
<thead>
<tr>
<th>Name of Facility</th>
<th>Location</th>
<th>Sports Played</th>
<th>Seat Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Star Sports Arena</td>
<td>Rochester, NY</td>
<td>roller and floor hockey, soccer, lacrosse</td>
<td>300</td>
</tr>
<tr>
<td>Amateur Sports Park</td>
<td>Rochester, NY</td>
<td>baseball, softball, flag football, soccer, lacrosse, volleyball</td>
<td></td>
</tr>
<tr>
<td>Blue Cross Arena</td>
<td>Rochester, NY</td>
<td>professional and amateur sports, hockey, arena football, basketball, indoor lacrosse, concerts</td>
<td>14,000</td>
</tr>
<tr>
<td>Country Club of Rochester</td>
<td>Rochester, NY</td>
<td>golf</td>
<td></td>
</tr>
<tr>
<td>Durand Eastman Golf Club</td>
<td>Irondequoit, NY</td>
<td>golf</td>
<td></td>
</tr>
<tr>
<td>Dwyer Stadium</td>
<td>Batavia, NY</td>
<td>baseball</td>
<td></td>
</tr>
<tr>
<td>Empire Park</td>
<td>Webster, NY</td>
<td>baseball, soccer</td>
<td></td>
</tr>
<tr>
<td>Fair and Expo Center</td>
<td>Henrietta, NY</td>
<td>County Fair, conventions</td>
<td></td>
</tr>
<tr>
<td>Frontier Field</td>
<td>Rochester, NY</td>
<td>baseball, soccer</td>
<td>14,500</td>
</tr>
<tr>
<td>Genesee Valley Golf Course</td>
<td>Rochester, NY</td>
<td>golf</td>
<td></td>
</tr>
<tr>
<td>Genesee Valley Park Complex</td>
<td>Rochester, NY</td>
<td>hockey, ice skating, swimming, softball, baseball, soccer</td>
<td>1,200</td>
</tr>
<tr>
<td>Grace and Truth Sports Park</td>
<td>Hilton, NY</td>
<td>soccer, paintball, baseball, softball, flag football</td>
<td></td>
</tr>
<tr>
<td>Harro East Athletic Club</td>
<td>Rochester, NY</td>
<td>exercise, fitness, squash, swimming, racquetball, volleyball, basketball</td>
<td></td>
</tr>
<tr>
<td>Locust Hill Country Club</td>
<td>Pittsford, NY</td>
<td>golf</td>
<td></td>
</tr>
<tr>
<td>The Main Street Armory</td>
<td>Rochester, NY</td>
<td>event venue for sports and concerts, paintball facility</td>
<td></td>
</tr>
<tr>
<td>McAvoy Park</td>
<td>Rochester, NY</td>
<td>softball, football, soccer, lacrosse, field hockey, baseball</td>
<td>800</td>
</tr>
<tr>
<td>McDonough Park</td>
<td>Geneva, NY</td>
<td>baseball</td>
<td></td>
</tr>
<tr>
<td>Name of Facility</td>
<td>Location</td>
<td>Sports Played</td>
<td>Seat Capacity</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Mid-Town Athletic Club</td>
<td>Rochester, NY</td>
<td>tennis, basketball, squash, volleyball</td>
<td></td>
</tr>
<tr>
<td>Oak Hill Country Club</td>
<td>Pittsford, NY</td>
<td>golf</td>
<td></td>
</tr>
<tr>
<td>Ridgecrest Park</td>
<td>Webster, NY</td>
<td>baseball, basketball, bocce, skatepark, box lacrosse, roller hockey</td>
<td></td>
</tr>
<tr>
<td>Rochester Sports Garden</td>
<td>Rochester, NY</td>
<td>indoor soccer, basketball, volleyball</td>
<td></td>
</tr>
<tr>
<td>The Sports Centre at MCC</td>
<td>Rochester, NY</td>
<td>hockey, ice skating</td>
<td>3,250</td>
</tr>
<tr>
<td>Thomas Creek Ice Arena</td>
<td>Fairport, NY</td>
<td>hockey, ice skating</td>
<td>800</td>
</tr>
<tr>
<td>Total Sports Experience</td>
<td>Rochester, NY</td>
<td>indoor soccer, basketball, softball, fitness center, outdoor soccer</td>
<td></td>
</tr>
<tr>
<td>Webster Ice Arena</td>
<td>Webster, NY</td>
<td>hockey, ice skating, indoor soccer</td>
<td>500</td>
</tr>
</tbody>
</table>

Note. The above information was found on the Monroe Sports Commission’s website at [http://www.monroecountysports.org/displayFacility.php?facility-211](http://www.monroecountysports.org/displayFacility.php?facility-211)
Appendix B

Approved Cover E-mail for Survey

To: Rochester Area Sports Facility Managers

From: Benjamin Ward

Date: February 20, 2012

Subject: Survey regarding venue accidents and possible installation of improved safety measures

Hello,

My name is Ben Ward, and I am a Sport Management Major at St. John Fisher College. I am working on my senior thesis exploring issues related to fan safety at sporting facilities. With the deaths of two fans at baseball stadiums as a result of falling out of the stands during the summer of 2011, there is talk of increasing railing heights and installing netting throughout stadiums to ensure fan safety. There is also talk of eliminating the assumption of risk or baseball rule which has been used by the courts to decide liability cases for fan accidents in many sports. As part of my research, I would like to know your opinion on these two issues.

I have attached a survey with some questions regarding sport facility safety concerns, safety measures now in place, and a comment area for additional suggested safety measures. The comment area can be used to discuss anything from, but not limited to facility safety issues, concerns, and solutions to the operation as well as responsibilities of your job. The survey will take only a few minutes to complete and will help with the research of this current issue facing sport facility owners and managers around the world. Specific personal information obtained from the questionnaire will not be disclosed in the thesis paper. Just click on the link below to advance to the survey and complete before midnight Monday, February 27, 2012.

https://sjfc.us2.qualtrics.com/SE/?SID=SV_bguD5ovvyMbIxBG

Dr. Emily Dane is my thesis professor at St. John Fisher College. If you have any questions or concerns, please contact her at edane@sjfc.edu or me at bgw07422@sjfc.edu. I appreciate your help and thank you in advance for your time and effort.

Sincerely,

Ben Ward
Attachment
Appendix C

Approved Introductory Page and Senior Thesis Survey

The focus of this research is to study the reactions of facility managers when they hear about accidents involving fans being injured by projectiles or accidents in facilities including falling out of the stands. It is also to study possible solutions to prevent such accidents, to seek opinions regarding elimination of the assumption of risk liability rule, and to learn what the job of facility manager is about.

1. Professionally, what is your reaction when you hear about fan accidents and deaths at sports events?

2. Do you think railing heights should be increased in sports facilities to prevent fan/spectators from falling out of stands?
   
   _____ Yes
   _____ No

3. Do you think netting should be installed in sports facilities to prevent anyone attending a game or event from falling out of the stands or being hit with projectiles?
   
   _____ Yes
   _____ No

4. What new safety mechanisms have you implemented in your facility in the past year?

5. Do your customers talk to you or other facility staff about their safety concerns?
   
   _____ Yes
   _____ No

6. Please choose those safety concerns that your customers talk to you or other facility staff about from the selections below.

   □ Railing heights in the stands too low
Not enough netting to prevent being hit by flying projectiles (baseballs, broken bats, auto parts, etc.)
Not enough netting to prevent falling out of stands
Other ________________________________________________________________

7. Do your customers/clients feel new safety measures will remove them from the live action of games or events? If yes, in what ways?
   ____ Yes
   ____ No
   ____ Unsure

8. The assumption of risk or "baseball rule" states fans know the dangers that are associated with certain sports, thus removing liability from facility owners. Do you think the assumption of risk liability rule will be eliminated? If yes, how might that affect you and your facility?
   ____ Yes
   ____ No
   ____ Unsure

9. Please check those options listed below that best describe your type of sports facility.
   □ Indoor sports          □ Event venue
   □ Outdoor sports         □ Fitness center
   □ Professional sports    □ Other ________________
   □ Recreational

10. How many years have you worked in facility operations (management or otherwise)?
    □ 0-5 years
    □ 6-10 years
    □ 11 - 20 years
    □ More than 20 years
11. Please select your age from the choices offered below.

   21 – 30 _____
   31 – 40 _____
   41 – 50 _____
   51 – 60 _____
   Other _____

12. Please select the highest level of education you have completed from the options below.

   - O High school diploma
   - O Associates degree
   - O Bachelors degree
   - O Masters degree

13. What was your major?

14. Do you have any comments that you would like to add about but not limited to the issues in the survey, e.g. facility safety issues, fan awareness of safety hazards, or what is involved in your job?
Appendix D

Approved Cover Letter for Senior Thesis Survey Sent Via Regular Mail

To: Rochester Area Sports Facility Managers

From: Benjamin Ward

Date: February 21, 2012

Subject: Survey regarding venue accidents and possible installation of improved safety measures

Hello,

My name is Ben Ward, and I am a Sport Management Major at St. John Fisher College. I am working on my senior thesis exploring issues related to fan safety at sporting facilities. With the deaths of two fans at baseball stadiums as a result of falling out of the stands during the summer of 2011, there is talk of increasing railing heights and installing netting throughout stadiums to ensure fan safety. There is also talk of eliminating the assumption of risk or baseball rule which has been used by the courts to decide liability cases for fan accidents in many sports. As part of my research, I would like to know your opinion on these two issues.

I have attached a survey with some questions regarding sport facility safety concerns, safety measures now in place, and a comment area for additional suggested safety measures. The comment area can be used to discuss anything from, but not limited to facility safety issues, concerns, and solutions to the operation as well as responsibilities of your job. The survey will take only a few minutes to complete and will help with the research of this current issue facing sport facility owners and managers around the world. Specific personal information obtained from the questionnaire will not be disclosed in the thesis paper. Please return the completed survey in the enclosed self-addressed, stamped envelope by March 1, 2012.

Dr. Emily Dane is my thesis professor at St. John Fisher College. If you have any questions or concerns, please contact her at edane@sjfc.edu or me at bgw07422@sjfc.edu. I appreciate your help and thank you in advance for your time and effort.

Sincerely,

Ben Ward
Attachment
Appendix E

Table 1

*Sport, Safety Concerns and Measures*

<table>
<thead>
<tr>
<th>Sport</th>
<th>Safety Concerns</th>
<th>Current Safety Measures</th>
<th>Suggested Improved Safety Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseball</td>
<td>Foul or homerun balls</td>
<td>Netting behind home plate</td>
<td>Install netting throughout stadiums</td>
</tr>
<tr>
<td></td>
<td>Tossed balls to fans</td>
<td>Toss ball into middle of stands</td>
<td>Eliminate player/fan reaction</td>
</tr>
<tr>
<td></td>
<td>Broken maple wood bats</td>
<td>Netting behind home plate</td>
<td>Use a different wood to make bats</td>
</tr>
<tr>
<td></td>
<td>Falls out of stands</td>
<td>Railings comply with codes</td>
<td>Increase railing heights, netting</td>
</tr>
<tr>
<td></td>
<td>Falls off escalators</td>
<td></td>
<td>Offer elevators as alternative to escalators</td>
</tr>
<tr>
<td>Hockey</td>
<td>Deflected pucks</td>
<td>5 ft. Plexiglas screens around rink and netting from top of glass to ceiling</td>
<td></td>
</tr>
<tr>
<td>Golf</td>
<td>Errant golf balls</td>
<td>Golfers warn fans by shouting “fore”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Overturned golf carts</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thrown clubs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reckless golf swings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NASCAR</td>
<td>Flying auto parts</td>
<td>Restrictor plates to reduce car speed</td>
<td></td>
</tr>
<tr>
<td>Soccer /</td>
<td>Overcrowding</td>
<td></td>
<td>Reduce number of tickets sold</td>
</tr>
<tr>
<td>football</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outdoor</td>
<td>Lightning</td>
<td></td>
<td>Information, instruction, assistance to fans</td>
</tr>
<tr>
<td>sports</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix F

Table 1

Types of Facilities

![Pie chart showing types of facilities]
Appendix G

Table 1

*Facility Manager Demographics - Experience*

<table>
<thead>
<tr>
<th>Years in Facility Operations</th>
<th>0-5 years</th>
<th>6-10 years</th>
<th>11-20 years</th>
<th>More than 20 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.5</td>
<td>2.0</td>
<td>2.5</td>
<td>3.0</td>
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</tbody>
</table>

Table 2

*Facility Manager Demographics - Ages*

<table>
<thead>
<tr>
<th>Age</th>
<th>21-30</th>
<th>31-40</th>
<th>41-50</th>
<th>51-60</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yrs</td>
<td>0.5</td>
<td>2.0</td>
<td>2.5</td>
<td>1.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>
Appendix G

Table 3

*Facility Manager Demographics - Education*
Appendix H

Table 1

Facility Manager Responses
Appendix I

Table 1

*Customer Responses*

<table>
<thead>
<tr>
<th>Voice Concerns</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not enough netting from falling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not enough netting from projectiles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Railing Heights</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remove from live action</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Red: No
- Blue: Yes