

Buffer Zones Through the Lens of Golf: A Negligence Case Content Analysis

Natalie Bird and Merry Moiseichik

Buffer zones are a risk management strategy used within sport and recreation to protect participants and spectators from injury. Within the recreational golf sector, buffer zone standards do not exist. Recreational golf courses serve a wide range of customers in terms of age, skill level, and experience. A legal case content analysis of 1,561 golf negligence lawsuits answered research questions related to locations of incidents, circumstances, and injuries or damages that resulted from errant golf shots. A Westlaw search provided 133 cases within the scope of this study, 85 of which could have been possibly prevented with proper buffer zones. In lawsuits in which the golf course was sued, the course prevailed 47.5% of the time and most cases specifically alleged a failure to provide reasonably safe conditions or negligent course design. This article concludes by providing practical recommendations for practitioners to protect golf courses from litigation stemming from errant golf balls.

Keywords: golf, buffer zone, errant shot, negligence, risk management

Introduction

Every sport has inherent risks and golf is no exception. Anyone who watches professional golf regularly sees a spectator get hit by an errant shot, and most avid golfers have experienced the panic of almost being struck by a golf ball. Awareness of the severity of injuries caused by errant shots has reemerged after professional golfer Brooks Koepka struck a woman in the eye at the 2018 Ryder Cup. This incident quickly made its way into the media, along with the woman's threat to sue tournament organizers. The danger of errant shots at professional events has become a popular discussion topic and this risk is relevant in every stage of the game. These incidents and the subsequent threat of litigation pose an important question: What precautions are the golf industry taking to protect spectators and players from injury

Natalie Bird, PhD, is an assistant professor in the Health, Human Performance and Recreation Department at Pittsburgh State University. Her primary area of research is risk management and legal issues as they pertain to the golf industry. Email: nbird@pittstate.edu

Merry Moiseichik, PhD, is a professor of recreation and sport management in the Department of Health, Human Performance and Recreation at the University of Arkansas. Her research interests include community development and law as it affects recreation and sport. Email: merry@uark.edu



due to errant shots? More specifically, how are golf course managers protecting players from injury due to errant shots during regular play?

Buffer zones are not created to change an activity to make it safer, but rather to create a space around the activity area to increase safety for players and spectators from foreseeable injury. Because every sport has its own inherent risks due to elements such as rules, equipment, physical demands, and number of participants, buffer zones are not a one-size-fits-all solution used to mitigate participant injury. Some sports have standard recommendations regarding buffer zones, but many governing bodies provide no or inconsistent safety suggestions for their implementation in golf (Martin & Seidler, 2009). Inadequate buffer zones may cause serious injuries and also breach a practitioner's duty to provide a reasonably safe environment for participants. Professionals who do not understand the risks associated with inadequate buffer zones put their participants at risk, which creates opportunities for litigation (Dougherty & Seidler, 2007). "In short, one can drastically reduce the likelihood of participant injuries and subsequent lawsuits in many sports and activities simply by providing ample buffer zones" state Dougherty and Seidler (2007, p. 5).

One would assume golf buffer zone standards would have been developed over time, especially considering the game of golf is more than 200 years old (Goodner et.al., 2017). Dr. Alister MacKenzie's 1920 book *Golf Architecture: Economy in Course Construction and Green-Keeping* is the first publication in golf course design. Most of the points made in this work focus on creating the best experience for the player, sprinkled with vague statements such as "there should be a minimum of blindness for the approach shots" that are unclear in context (Mackenzie, 2015, p. 5). Surprisingly, resources available today are not much different. There are presently no professional standards in golf course design and buffer zone implementation, nor is there a governing body solely focused on safety standards. The PGA of America has affiliations with two golf course design and architecture entities: The Golf Course Builders Association of America and American Society of Golf Course Architects (PGA.com, 2018). Both of these associations provide membership for course architects and designers, but do not create or regulate formal standards. Private firms and organizations exist but focus primarily on architect certification and the business of building golf courses.

Walsh et.al. (2017) found being struck by a golf ball as the cause of 16% of golf-related injuries in the US. Corine Remande is pursuing litigation after being struck in the right eye while standing near the green of the 6th hole, a short par 4, at Le Golf National club near Paris, France (Golf Channel Digital, 2018). In recent years there have been no updates on Remande's threat to sue, but sadly this scenario is not unique. In fact, a plaintiff struck in the eye due to an errant shot is a very common lawsuit topic in the game of golf; countless cases and law reviews detail scenarios in which players and spectators have lost vision or incurred serious eye injuries.



Tonner et. al. (1999) found over half of the golf litigation between 1973 and 1998 was personal injury claims resulting from errant golf shots.

The legal ramifications of errant shots are broader than they appear at the surface. Buffer zone lawsuits are most often due to proximity of holes, such as in *Milligan v. Sharman* (2008) and *Johnson v. City of Detroit* (1977). In both cases, the plaintiff sued the golf course owner after being struck by another player's shot from an adjacent hole. The decision in both cases was the owner owed no responsibility because expert witnesses "failed to identify any specific industry standard upon which he relied, in concluding that the golf course was negligently designed" (*Milligan v. Sharman*, 2008, p. 1).

Proximity of holes, however, is not the only concern when it comes to buffer zones; injuries may be caused by "golfers to other golfers; golfers in the same party and in another party; while taking instruction; driving golf carts; using driving ranges; premises; club houses; hitting non-golfers such as caddies, children, employees, spectators, and residents adjacent to golf courses" (Sawyer, 2005, p. ix). In *Hawkes v. Catatank Golf Club* (2001) an errant shot from a hole parallel to the parking lot struck the plaintiff as he was walking toward the clubhouse. Property damage on a golf course premises was present in the case of *MEC Leasing, LLC. v. Jarrett* (2007), where four vehicles were damaged by four separate golf balls while the cars were parked next to the golf course.

Dougherty and Seidler (2007) state "buffer zone problems frequently arise when program providers attempt to maximize the usable space for activity" (p. 5). On golf courses, many bathrooms, concession stands, and cart paths are strategically placed as to not interfere with a hole's aesthetic design or difficulty level. Cart path and restroom locations in *Yoneda v. Tom* (2006) resulted in injury as a golfer was struck after emerging from behind a bathroom while driving on the cart path. An errant shot caused the injury, but poorly arranged cart paths and restrooms were deemed to be the reason for injury. Regardless of each case's details, these lawsuits could have been prevented had buffer zone standards required better course planning and management.

The purpose of this article was to determine the necessity of buffer zone standards for the recreational sector of the golf industry. It is guided by three research questions:

1. Where on and around the golf course do most golf ball injuries occur?
2. What is the proximate cause of damage resulting from errant golf shots?
3. What injuries and damage are the result of errant golf shots?



Review of Literature

According to a 2017 study, 16% of golf-related injuries in the US are due to being struck by an errant golf ball (Walsh et.al., 2017). Although this is an issue at the professional level, buffer zone-related injuries occur at every stage of the game.

Risk Management

“All sport activities have inherent risks associated with them that cannot be eliminated without altering the integrity of the activity” state Martin and Seidler (2009, p. 9). Risk management is not an effort to remove all risk, but rather “a process to minimize loss, measured in dollars, to an organization” (Kaiser et. al., 2016, p. 631). Part of the risk management process is conducting a risk assessment to identify loss exposures. Doing so “can be of enormous help in distinguishing big risks from little ones” (Graham & Rhomberg, 1996, p. 21). However, not all risks are predictable because “uncertainty is an intrinsic part of the risk” (Kaplan & Garrick, 1981, p. 21).

Risk management does not look the same for every organization and is an ongoing process. It is not only about avoiding litigation, but “adds ‘value’ to an operation in four dimensions: (1) it enhances participant experiences, (2) it provides good stewardship of assets, (3) it forestalls problems, and (4) it encourages professional practices” (Kaiser et.al., 2016, p. 633). Within the context of recreation and sport, sound risk management allows participants to more freely participate with limited fear of risks beyond those inherent to the activity (Kaiser et.al., 2016).

Risk Management Concerns in Golf

Risk management is a broad concept especially regarding golf courses, and all the aforementioned information provides context that can be used to tailor risk management efforts. Sawyer (2005) stated “some areas of potential risk include discrimination, errant golf balls, food and beverage concessions, general protection against environmental pests and varmints, golf carts, maintenance practices, steps and pavement, and wrongful death” (p. 4). Other golf-specific risk management concerns include, but are not limited to, geographic location and weather, alcohol-related issues, vandalism, and trespassing.

Buffer Zones Defined

Seidler (2006) defines a buffer zone as “a certain amount of space between the activity area and any obstructions ... to enhance the safety of the participants” (p. 33). Reasonable precautions must be taken by practitioners to protect those actively and passively participating (Dougherty & Seidler, 2017). Insufficient buffer zones breach that duty and often result in injury that could have been prevented. Buffer zones are not alterations of an activity, but a risk management strategy to “present the safest activity area possible” (Mumcu et.al., 2019, p. 86).



Buffer zone injuries are possible in any sport and recreation activity, and boundaries do not always limit the space used in an activity (Seidler, 2006). Seidler (2006) notes that sports like tennis, volleyball, softball, and baseball are often played beyond out-of-bounds and foul lines and “generous buffer zones must be designed into these facilities to accommodate this” (p. 34). Lawsuits regarding wide running areas and treadmill spacing in fitness centers have also been noted by Dougherty and Seidler (2013). Likewise, fire extinguishers, doorways, water fountains, telephone and electrical boxes, water valves, and other fixtures should be considered and overlapping fields and courts should be avoided (Seidler, 2006). If an open space cannot provide a buffer zone, practitioners can install other buffers such as padding, netting, fences, and landscaping to reduce risk.

Within the sport of basketball, it is common for players to exit the playing area and collide with walls and stands. Some players even hurt fans when pushed out of bounds—at a Cleveland Cavaliers game, the wife of professional golfer Jason Day was injured when LeBron James crashed into their courtside seats (Vardon, 2019). One would think the commonality of buffer zone injuries would be enough to develop professional standards. However, inconsistencies exist in the recommendations of buffer zones around courts—three to 10 feet are suggestions for basketball courts based on organizations such as the National Federation of State High School Associations (NFHS), NCAA, and the American Alliance for Health, Physical Education, Recreation and Dance (AAPHERD; Martin & Seidler, 2009).

Perhaps one reason official standards have not been created for all activities is because players participate knowing risk still exists. Martin and Seidler (2009) discuss *Ribaudo v. La Salle Institute* (2007) in which a basketball player was injured by colliding with a wall surrounding the court; the plaintiff claimed his injuries were a result of the lack of padding on the wall (Martin & Seidler, 2009). Ultimately, the court dismissed the complaint based on “primary assumption of risk, open and obvious hazards, and failure to prove negligence” (p. 9). Assumption of risk means a person understands and acknowledges the inherent risks associated with an activity and chooses to participate anyway. It, however, “depends upon our total state of knowledge as of right now; upon all evidence, data, and experience with similar courses of action in the past” (Kaplan & Garrick, 1981, p. 20).

Golf Industry Governing Bodies

Standards, recommendations, and suggestions for buffer zones are created by an organization or professionals active in that sport or activity. There are many large governing bodies that oversee various facets of the golf industry. These include the National Golf Foundation (NGF), United States Golf Association (USGA), Professional Golfers Association of America (PGA), Ladies Professional Golf Association (LPGA), American Society of Golf Course Architects (ASGCA), and the Golf Course Superintendents Association of America (GCSAA).



The USGA is the chief governing organization of the game of golf. The organization sets the official “Rules of Golf” and generates other related publications that govern and set standards for the industry. However, they provide limited standards or guidelines for golf course design and layout; the proper size of tee markers, appropriate locations for holes on the putting green, and course setup strategies to increase pace of play are examples of standards set by the USGA.

USGA Rule 8A-4 states “for course design or safety reasons, a committee can choose to specify that a particular part of the course is out of bounds during the play of a particular hole” (USGA, 2020, para. 59) to “prevent a player from cutting the dogleg by playing a ball to the fairway of another hole” (para. 60). This primarily refers to player shots that should be considered when setting up a tournament, not the actual design or everyday maintenance of a course. Beyond Rule 8A-4, the USGA provides little advice for risk management. The organization suggests acting responsibly when lightning is a threat and recommended social distancing and sanitary practices during the 2020 COVID-19 outbreak. Other risk management decisions are up to the discretion of the golf course or tournament organization.

The ASGCA provides resources available on its website including a publication by Dr. Michael Hurdzan (2005) titled “Building a Practical Golf Facility” that outlines the golf course development process. It explicitly states, “there are no safety standards for design of a golf facility, so each designer must apply prudent criteria, and then be prepared to defend those criteria if necessary” (p. 29) and reiterates there are “no constraints or guidelines on making golf holes” (p. 16). The lack of buffer zone standards in golf course design requires designers to make prudent decisions with little guidance (Hurdzan, 2005). An interactive “Course of the Future” map on the ASGCA website displays “some of the ways golf courses are being designed and maintained to welcome new players, save costs, increase revenues, integrate new technologies and operate with ‘out of the box’ thinking to benefit everyone” (ASGCA, 2020, para. 8). It suggests adding amenities within the golf course, such as fishing areas and sports fields. These family-friendly features add functional and aesthetic value but leave little room for buffer zones.

Player Responsibility

Despite the resources available to help players decide what tees to play, and regardless of the risk management practices in place, every player assumes some responsibility for his own safety. Demographics, course culture, and player skill all may shape a player’s attitude toward his responsibility and the likelihood he will act in a reasonable manner.

Madison Golf Club in Madison, NJ, explicitly mentions this responsibility on its website: “MGC is a very tight golf course, and we have safety rules of which every member and guest should be cognizant. All safety-related rules must be strictly followed at all times” (Madison Golf Club, n.d., para. 1). A “walk-through” orientation



is required for all new members prior to play and can also be requested for review at any time: “This is for your own safety and the wellbeing of others. Golf is all about courtesy, good manners and sportsmanship ... plus, smart play” (para. 1). The golf club’s website educates players of light switch systems used to alert players on the tee that another group is in the fairway and communicates right of way instructions for golfers playing on adjacent holes. Madison Golf Club (n.d.) explicitly mentions what to do in the event an errant shot causes damage:

If any golfer at MGC, a member, guest, or family member, hits an errant shot that causes damage or is suspected of causing damage to any person, neighboring house, property, or cars traveling on the neighboring streets, it is the responsibility of that member to approach the person, home owner or driver of the vehicle, attend to the wellbeing of any person struck by a ball, inspect for any possible damage caused by the ball and settle the matter with the person, property owner or driver with the same courtesy and respect you would want shown to yourself. You are to report the incident before leaving the Club grounds to a Club Officer, Board Member, Club Professional or staff member. This is why you have homeowner’s insurance and personal liability umbrella policies – any damage you cause is your individual responsibility. Please consult your insurance carrier or agent for appropriate coverage. The club does not have funds to cover these expenses or insurance for all members. (para. 12)

Madison Golf Club is not the norm. Overt discussion of player responsibility and rules meetings are uncommon practices, especially for courses where managers have a wide range of responsibilities. Safety rules and training are also not enough to guarantee players will act responsibly, the facility type, attitudes, and dedication level impact the actions of players.

Golf Clientele, Norms, and Skill Levels

Golfers come in all shapes, sizes, and player levels. A beginner may not hit a ball far but may slice or hook it often. Skilled players typically hit it longer, often putting other players and land adjacent to the course at risk. Therefore, a golfer’s demographic profile and level of dedication could impact their skill level and general understanding of the game of golf.

To say a beginning golfer is bombarded with information is an understatement; a player usually learns basic etiquette and rules during their first lesson. Safety norms such as safe areas to stand around other players are also emphasized early in one’s golfing career. In *Koltes v. St. Charles Park District* (1997), the plaintiff claimed the first tee’s designated standing area positioned players in unsafe proximity to a ball’s flight zone. The case was ruled in favor of St. Charles Park District because “the golfer knew that she was to stand behind and out of the way of golfers who were teeing off” (p. 1). Appropriate situations in which to use “FORE!” are also typically



ingrained early. There are many other norms or rules, most of which are rooted in safety and etiquette.

A player's experience and skill level are directly related to the comprehension of the norms, especially at courses in the public sector. Junior golfers, beginners, highly skilled players, intoxicated persons, and the elderly are some of the potential customers at a golf course on a typical day. This diversity is supported by PGA initiatives such as The First Tee and Play Golf America; these organizations provide junior golf and encourage participation for golfers of all ages and abilities. A golf population comprised of varying skill levels and understanding necessitates proper use of buffer zones to provide a reasonably safe and fun environment for everyone.

The National Golf Foundation is an independent organization known for objective golf industry data collection. Most NGF reports are only accessible to foundation members; therefore, the figures in the following sections are approximated to comply with NGF copyright policy. Demographics, golfer dedication, types of golf facilities, and USGA measures are discussed to best generate a profile of the recreational golfer.

In industry reports, Golfers, or On-Course Golfers, are defined as “individuals ages 6 and above who played at least one round of golf on a golf course” (National Golf Foundation, 2019c, p. 2). Conversely, Off-Course Only Participants are those who only participated via practice areas, golf simulators, or at entertainment venues such as TopGolf (p. 2). A recreational golfer is an amateur player who plays golf for enjoyment. This includes beginners to college and elite amateur players and everyone in between.

Types of Golf Facilities

The NGF divides golf facilities into the following categories, as defined below:

- *Public Facility*: “a golf facility that is open to the public, all or part of the time. It may offer memberships”
- *Municipal Facility*: “a subset of public facilities, owned by a tax-supported entity such as a city, county, or state and open to the public at all times”
- *Private Facility*: “a golf facility where play is restricted to members and their guests” (NGF, 2019b, p. 1)

Approximately 15,000 golf facilities exist in the United States, and more than 70% are open to the public.

USGA Measures

The USGA has developed tools to measure golfer skill levels and golf course difficulty, and the relationship between the two. The USGA identifies players as “Scratch Golfers” and “Bogey Golfers.” Scratch Golfers are players who shoot around par every time they play; “He (she) can hit tee shots an average of 250 (210) yards and reach a 470 (400)-yard hole in two shots” (USGA, 2019, para. 10). Bogey



Golfers make a bogey (1 over par) on every hole, and “he (she) can hit tee shots an average of 200 (150) yards and can reach a 370 (280)-yard hole in two shots (para. 12). Golf course difficulty is quantified using the USGA Course Rating and Slope Rating. The USGA Course Rating assesses the playing difficulty of a course for a scratch golfer, by accounting for yardage and obstacles such as hazards, out of bounds, etc. Bogey Rating is used to help players decide which tees to play (USGA, 2019). These measures, if correctly used, can help players decide what courses and tees are best suited for their game.

Buffer Zones and Golf

Despite other risk management concerns that pertain to the golf industry, this analysis is primarily focused on buffer zones, which are broader than they appear at the surface. Throughout the literature, buffer zones are defined within the golf industry in several ways. One of the most common research areas refers to wildlife and environmental impacts of golf course construction and maintenance. The concept is also discussed as related to community and neighborhood development and common resident complaints; these arguments usually refer to nuisances and the introduction of wildlife and plants uncommon to the area. This study focused on injuries and property damage as a result of errant shots and insufficient buffer zones for safety. Other types of buffer zones were beyond the scope of this study.

Theoretical Framework

The theoretical framework that guided this research is Smillie and Blisset’s (2010) risk communication model. It encourages the interpretation of perceived risk in the context of the environment being studied (Smillie & Blisset, 2020). The perceived risk of inadequate buffer zones was the motivation for completing this study, which focused on the legal and physical environment of the recreation sector of the golf industry. Although this model focuses on risk communication and perception, it follows a linear process that can be adapted to answer the research questions in this research. The model consists of three stages: Stage 1: Risk Appraisal, Stage 2: Situational Analysis, and Stage 3: Source Analysis (p. 117) as detailed in Figure 1.

The three stages of Smillie and Blisset’s (2010) model are structured as questions that require objective answers (p. 118). Questions such as “What is the risk?” and “Who will be affected by the risk?” are answered in Stage 1, which serves as an “objective overview” (p. 118). Stage 2 is a Situational Analysis that explores past issues and other political, cultural, and societal factors related to the risk (p. 122). Lastly, Stage 3 asks questions such as “Why are you communicating about this risk? Why now?” and “Who is your intended audience?” (p. 126) to encompass the communicator’s analysis. The model proposed by Smillie and Blisset (2010) served



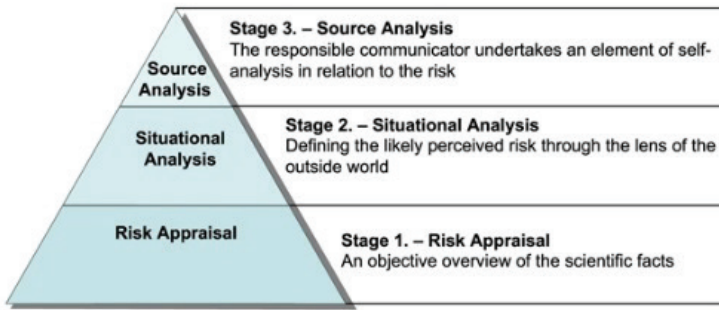


Figure 1. Smillie & Blisset's model for risk communication strategy.

Note. Smillie & Blisset's model for risk communication strategy. Reprinted from "A model for developing risk communication strategy" by L. Smillie & A. Blisset, 2010, *Journal of Risk Research* 13(1), p. 117.

as an appropriate blueprint for this study, which thoroughly investigated the common themes and legal issues that pertain to golf ball-related injuries.

Methodology

A legal case content analysis using a Westlaw keyword search examined legal cases occurring from 1960 to 2019 using "frequency as a standard of reference" (Kaplan & Garrick, 1981, p. 18) to analyze golf ball-related injuries caused by inadequate buffer zones in the recreational golf sector (Graham & Rhomberg, 1996). The Westlaw database was chosen for data collection for its reputation within the academic and legal communities, and for ease of access to the large number of cases that are public record. A case content analysis is appropriate for recreational golf buffer zone research because lawsuits identify situations and themes related to errant shot injuries. According to Moiseichik (2014), a "content analysis is a replicable, systematic examination" used to identify "themes, patterns, trends and longitudinal changes to draw inferences" (p. 43). Hall and Wright (2008) state "content analysis is more than a better way to read cases. It brings the rigor of social science to our understanding of case law, creating a distinctively legal form of empiricism" (p. 64). This type of analysis is considered valid "if it accurately measures the particular components of the decision that the researcher wants to study" (Hall & Wright, 2008, p. 88). A legal case content analysis was also deemed appropriate for this research to relay legal analysis to practitioners. It can be used to identify "useful points of connection" to "facilitate understanding of the situation" to best understand the legal issues regarding recreational golf buffer zones (Kivunja & Kuyini, 2017, p. 36).



On the Advanced Search webpage, “golf AND negligence” was entered in the “All of These Terms” field. The selected date range was 1/1/1960 to 12/31/2019 and the results from this search were then limited by entering “ball OR shot” in the “Search Within Results” field. This search produced a total of 1,561 results: 975 state cases and 586 federal cases. Each case was reviewed individually, and irrelevant cases were removed. Relevance was based upon whether the case revolved around golf and if damage incurred was due to a golf shot or golf ball. Golf carts, workers compensation, golf clubs, legal and administrative issues such as contracts, patents, products liability, human resource practices, and food and beverage operations were beyond the scope of this research and deemed irrelevant.

After sorting the Westlaw search results by date and eliminating the irrelevant items, remaining cases were thoroughly examined to determine if the legal case subject was golf, and whether an errant ball or shot was the proximate cause of injury or damage. The researchers then logged case information in an Excel spreadsheet. Data extracted from each case included date, reference, injury, location category, emergent subcategory, legal topic(s), issue(s), and decision. The spreadsheet included both state and federal cases and was sorted alphabetically based on the location category. Results were then further organized and analyzed by the emergent subcategory. This sorting process and analysis were repeated separately for injury and legal topic(s). Additional notes about each case were made in the same spreadsheet if needed.

The 1960-2019 time period was chosen for many reasons. While the beginning history of golf in the US is somewhat unknown, the 1960s marked a “boom period” for growth in number of courses, participation, and accessibility (Chochran & Farrally, 2005). Golf Magazine published its inaugural issue in April of 1959 citing golf’s intended growth as the reason for creating the publication (GOLF Editors, 2019). Media during that time also played a large role in growing the game of golf as “television introduced the world and the United States to such golfing personalities as Arnold Palmer, Gary Player and Jack Nicklaus” (p. 658).

The goal of this research was to understand the locations, damages, and legal issues that pertain to golf ball-related incidents resulting from a lack of buffer zones. The review of literature and the data collected through the exhaustive case content analysis aimed to “predict future adverse events with sufficient warning to facilitate implementation of prevention programs” (Graham & Rhomberg, 1996, p. 17).

Analysis

In a dataset of 1,561 legal cases, 133 were concerned with errant golf shots that caused personal injury or property damage. These were the only cases reviewed for this study.



Incident Locations and Emergent Subcategories

Cases were categorized based on the location of the incident and divided into three groups: On Course, Off Course, and Course Premises. On Course cases included all lawsuits involving incidents that occurred within the confines of the golf course itself. The Off Course category pertained to lawsuits where injury or property damage off the golf course occurred as a result of a golfer's errant ball from on the course or on the course premises, such as a ball landing on adjacent property. Lastly, the Course Premises category encompassed all incidents that happened on the golf course property beyond the actual golf course itself, such as a driving range or parking lot. There were 79 cases that fit the On Course category, 37 that occurred Off Course, and 12 occurred on the Course Premises.

After dividing cases based on location, many subcategories emerged. The subcategories identified are as follows: a shot from same hole hitting someone in their own group; a shot from the same hole and hitting a different group; shot from a different hole and hitting someone in different group; damage by a shot landing in adjacent residence property; damage of vehicle property; injury caused by course maintenance issues; injuries sustained in a parking lot; injury at an adjacent residence; and shots that hit a person who was not golfing or on adjacent property. Each of these subcategories are operationally defined as they pertain to this specific study.

"Same hole – same group" refers to an incident that occurred between members of the same group while they were on the same hole, whereas "same hole – different group" pertains to incidents that occurred between members of different groups who were playing the same hole. "Different hole – different group" refers to incidents that occurred between golfers playing separate holes, such as where a shot left the fairway and landed on a different hole's fairway. Property damage was broken down into two smaller groups: "residence property damage" means exterior or interior destruction at a person's home and "vehicle property damage" refers to exterior destruction of a person's car, all-terrain vehicle (ATV), or recreational vehicle (RV). Issues that pertain to conditions that are the responsibility of the golf course are categorized as "maintenance," and "injury at residence" pertains to a situation in which a person incurs injury while outside or within a home off the course. Lastly, the "patron" subcategory refers to nongolfers as the subject of a case. This includes pedestrians, spectators, caddies, employees, and trespassers.

It was necessary to divide the cases into subcategories for a variety of reasons. Some of the subcategories refer to groups of people, whereas others are places of incidents or circumstances causing injury; regardless, the issue central to the case was used for categorization. This discussion mainly focuses on the issues and circumstances rather than the results of the case. While the decisions of each lawsuit are important, a thorough examination of decisions is outside the scope of this study.



Emergent Subcategories Irrelevant to Golf Buffer Zones

Because this study focused on injuries related to buffer zones, the dataset was further reduced to incidents that could have likely been prevented had proper buffer zones been in place. The same hole – same group, same hole – different group, and course maintenance subcategories were removed. Despite limiting them from the dataset, the removed categories still pose important risk management concerns for practitioners.

Same hole – same group. Same hole – same group incidents are typically not preventable by buffer zones. Most of these cases involved injury resulting from miscommunications between players, attempts to speed up play, and general inattentiveness.

Same hole – different group. Although efforts can be made to limit injuries, buffer zones are not risk management measures used to mitigate injury between players in different groups on the same hole. Many of the cases that fit this category are related to the common practice of “playing through.” Playing through simply means a slower group ahead lets a faster group skip in front to avoid slowing down all golfers on the course. Miscommunications and incorrect information also commonly cause injuries between players in different groups on the same hole.

Maintenance. Maintenance is one of the most important areas of risk management for practitioners in sport and recreation. Golf is no exception with large equipment and dangerous chemicals used throughout a course and the surrounding premises. Most cases that fell under the maintenance subcategory could have been prevented had the golf course taken proper measures, which do not include buffer zones. Maintenance employees may be present in any area of the golf course at any given time, putting them at high risk for being struck by a ball.

Emergent Subcategories in the Final Dataset

Once the irrelevant cases were removed, the final dataset has 85 lawsuits: 39 On Course cases, 34 Off Course cases, and 12 Course Premises cases. Categories and emergent subcategories are displayed in Table 1.

Different hole – different group. The most common type of incidents occurred between golfers in different groups on different holes. One of the most interesting cases identified in this content analysis was *Baker v. Thibodaux* (1985). In this case, Baker was struck by Thibodaux when he was looking for his ball on his hole. Thibodaux yelled “fore” after realizing he hit an errant shot, and when Baker saw the ball heading toward him, he attempted a backflip to avoid being struck by the ball. Unfortunately, he was unable to avoid the ball and lost the case because the court ruled hitting a bad shot was not enough to claim Thibodaux’s actions were negligent. Not all different group – different hole incidents involve attempts at gymnastics. In both *Lundin v. Town of Islip* (1994) and *Lincke v. Long Beach Country Club* (1998),



Table 1. Incident Subcategory Frequencies

Category and Subcategory	Frequency
On Course	
Different hole – different group	34
Patron	5
Off Course	
Vehicle property damage	10
Residence property damage	9
Patron	8
Injury at residence	7
Course Premises	
Patron	10
Parking lot	2

the plaintiffs sued the golf course claiming negligence in design and maintenance after being hit by golf balls from other holes. Both cases ruled in favor of the golf course based upon the assumption of risk doctrine.

Most every person that steps foot on a golf course can be hit by a golf ball. It is an inherent risk of the game. Assumption of risk essentially means a person willingly participates knowing and appreciating the risks inherent to the activity. Generally speaking, a defendant owes no duty to participants regarding inherent risks (Garner, 2019), and many golf courses believe assumption of risk doctrine will protect them from liability regardless the surrounding circumstances of an incident. However, assumption of risk is not black and white; a person must be able to acknowledge and understand the risk and assume an injury may happen as a result of their participation. A participant's age, experience, and general knowledge of an activity are a few factors that may be considered in court decisions involving assumption of risk.

Residence property damage. Another common category of cases revolved around physical property rather than personal injury. Sale of property was a recurring theme within this category. In *Masters v. Burton* (2013), *Yemel'Yanov v. Tomlinson Black North, Inc.* (2003), and *George v. Teare* (2000), the frequency of golf balls landing on the property causing damage was misrepresented at the time of sale of the home. In *George*, the sellers claimed only a few golf balls had landed on the property during the 30 years they owned the house; however, the new homeowners experienced damage and injury caused by more than 300 golf balls during the first



summer living in the home. The new homeowners in *Yemel'Yanov* deemed areas of their home and yard unusable due to the frequency of errant balls entering their property. Homeowners in *Dunn, III v. Eastover Country Club* (2006) also claimed their yard was partially inaccessible and unsafe because of errant golf balls from a nearby driving range. Property damage resulting from mishit balls from a driving range was also a theme in *Beers v. Brown* (2006), *Blommaert v. Borger Country Club* (2014), *Gellman v. Seawane Golf & Country Club, Inc.* (2005), and *Thomas Somerville Co., Inc. v. World of Golf, Inc.* (1992). In *Dunn* and *Beers*, nets were installed to remedy the issue, but failed to fix the problem.

Injury at residence. In some cases, individuals outside the confines of the golf course experienced injury as the result of the actions of a golfer on the course. A man was wading in his pool with his 1-year-old daughter when he was struck by a player's wayward shot in *Curran v. Green Hills Country Club* (1972). In *Mitchell v. WSG Bay Hills IV, LLC* (2013) and *Hennessey v. Pyne* (1997), residents were struck outside their condominiums adjacent to a golf course. In *Mitchell*, a woman was hit in the leg while unloading items from her vehicle outside of her condo. Errant shots were no stranger to the community of condominiums; many residents complained online of the frequency of stray balls landing on their property. Despite *Mitchell's* injury and resident frustration, the court dismissed the case, citing the risk of being hit by golf balls was just part of living next to a golf course.

Conversely, in *Hennessey*, the plaintiff was outside tending to flowers when she was struck in the head. Although she testified to her property being hit up to 10 times a day during the busy golf season, the court ultimately ruled assumption of risk doctrine did not apply despite the history of errant balls landing in her yard; she could not see the defendant on the tee and was therefore unaware of the risk at that time.

Patron. As mentioned previously, the patron subcategory includes non-golfers who are injured because of a golfer's errant shot. Throughout this analysis, injuries to patrons existed in On Course, Off Course, and Course Premises categories, as outlined in Table 2. People in this group include spectators, pedestrians, employees, caddies, and trespassers. Spectator injuries were the most common in this group, and related incidents are often the subject of media headlines. One spectator was literally starstruck at an exhibition event while watching professional golfer Tom Watson in *Baker v. Mid Maine Medical Center* (1985). Baker was so distracted by Watson that he was struck by the ball of another member in the professional's group. The incident in *Knittle v. Miller* (1985) also occurred at a pro-am event, where a woman sitting in a spectator area was hit by a player's ball. Guests at professional events are not the only spectators at risk of being struck by an errant shot. The plaintiffs in *Grisim v. TapeMark Charity Pro-Am Golf Tournament* (1987) and *Holbrook v. Muirfield Village Golf Club* (1981) were hit while attending amateur tournaments. All these cases ruled in favor of the respective defendant based on the assumption of risk doctrine.



Patrons in other areas on the course premises are also at risk of being struck by an errant ball. For example, in *Prochnow v. El Paso Golf Club, Inc.* (1993) a woman sitting on the deck of a clubhouse was struck by a golf ball hit from an adjacent hole. A young boy was injured while searching for golf balls, with permission, on a course in *Clawson v. Stockton Golf and Country Club* (1963). In *Lexington Country Club v. Stevenson* (1965), a vehicle passenger incurred an eye injury when the car was driving down the club's private driveway.

It is not uncommon for painters, roofers, and contractors to be hit by golf balls while working off the golf course, as seen in *Thomas v. Wheat* (2006), *Schmidt v. Courtney* (2003), and *Foote v. Feldman* (1994), respectively. Others have been struck while doing everyday activities, like a woman who was hit while enjoying coffee at a neighboring building in *Stern v. Easter* (2012). Some incidents are unique, such as in *Kirchoffner v. Quam* (1978) when a minor incurred an eye injury while boating on a river connected to the golf course. Pedestrians and joggers are no exception when it comes to golf ball-related injuries; a jogger running his everyday route was struck in the groin by a golfer from an adjacent course in *McGuire v. New Orleans City Park Improvement Association* (2003). The man sued the operator of the golf course but lost the case; the court held the jogger was aware of the risk because he had lived and run in the area for years.

Caddies and trespassers are also not immune from being struck by a golf ball. Many golf courses employ caddies to assist golfers with their equipment and on-course decisions, and one of the reasons a caddy is advantageous to a player is because of their familiarity with the golf course. In *McDonald v. Huntington Crescent Club, Inc.* (1989), a caddy sued the course claiming he had been improperly trained and the course did not provide barriers to adequately protect caddies from errant shots. McDonald's experience ultimately hurt his case; the court ruled in favor of the course because McDonald had caddied there more than 200 times and was aware of the risk of being hit. Golf course managers are also familiar with the course premises and are likely aware of people using areas of the golf course for other purposes, such as fishing. *Danaher v. Partridge Creek Country Club* (1982) presents a common scenario as Danaher was hit by a wayward shot when he was feeding fish at a pond on the course. Similar circumstances are especially prevalent at public and semi-private facilities and should be considered by managers with regard to both buffer zones and risk management in general.

Vehicle property damage. Property damage from golf balls is a common lawsuit claim. As previously discussed, homeowners have incurred damages as a result of errant shots, and damaged vehicles were also the subject of many cases in this analysis. Cars parked in driveways adjacent to the course were damaged in *Ellery v. The Ridge Club* (2005), *Bechhold v. Mariner Properties, Inc.* (1991), and *Malouf v. Dallas Athletic Country Club* (1992). In *Ellery*, it was ruled the club had no duty to



prevent incidents. However, in *Bechhold* the definition of “reasonable exposure” due to a hole’s reconfiguration could not be determined despite the property incurring damage as a result of approximately 1000 golf balls a year. Cars are not only damaged when parked next to a golf course. In *Rinaldo v. McGovern* (1991) the plaintiff’s windshield shattered as his car was struck while driving down the highway. The court ultimately favored McGovern in that he had no duty to warn of his poor tee shot, the driver would not have heard it. The course was not included in the case.

Parking lot. In parking lots, most people are careful to avoid getting hit by a car, but few recognize the likelihood of being hit by a golf ball. Two incidents in this analysis occurred in a parking lot: *Hawkes v. Catatank Golf Club, Inc.* (2001) and *Reardon v. Country Club at Coonamessett, Inc.* (1968). On his way to the clubhouse before a tournament, a golfer in *Hawkes* was struck in the eye, and in *Reardon* a player’s head was hit while walking to his car after his round. The question of whether the circumstances exceeded the usual risk of golf was discussed in each case, and the court ultimately favored the golfer in both scenarios.

Common Legal Issues

A variety of legal topics were identified throughout this content analysis. All cases had one thing in common: negligence. Black’s Law Dictionary (2019) defines negligence as “the failure to exercise the standard of care that a reasonably prudent person would have exercised in a similar situation” (p. 1245). For negligence to exist, four elements must be present: (1) duty, (2) breach of duty, (3) proximate cause, and (4) damages. There were five legal topics related to negligence that repeatedly emerged in this study: standard of care, reckless misconduct, duty to warn, foreseeability, and zone of risk. Each will be further discussed.

Standard of care and reckless misconduct. Sawyer (2005) notes standard of care is not based on persons’ qualifications, but upon circumstances of the situation. As discussed in *Werne v. Executive Women’s Golf Ass’n* (2009), there are five points to consider when determining standard of care: (1) nature of the sport involved, (2) type of contest, (3) participant age and skill level, (4) equipment involved, and (5) rules, customs, and practices of the sport. It is important to note these criteria are also discussed in relation to determining the size of buffer zones for activities. These criteria are described through the lens of golf to include risks of the golf activity, golf participants, knowledge and skill levels necessary, and environmental conditions, as they specifically apply to golf (Sawyer, 2005). The previously mentioned five points in *Werne* were considered in the ruling of that case. A woman playing in a glow golf event, struck by a ball hit by a golfer in her group, claimed that because glow golf is played in the dark, participants owe each other a higher standard of care. The court ruled against Werne because the golfer could “only be held liable if their conduct unreasonably increased the risks inherent in the game of glow golf or if they



unreasonably created or countenanced risks outside the range of ordinary activity involved in the sport” (*Werne v. Executive Women’s Golf Ass’n*, 2009, p. 7).

Also related to standard of care is reckless misconduct. According to Sawyer (2005), reckless misconduct is a concept a golf professional should understand; he defines it as “the intent to commit an act but with no intention to harm anyone” (p. 39). Instead of acting as any prudent person would in a situation, a reckless golfer is aware of the increase in risk but does not try to harm anyone with their actions. For example, in *Krych v. Brendenberg* (2019), a golfer struck a player in the head because he assumed his drive could not reach the group in the fairway. Reckless misconduct was discussed in many cases in this analysis. *Hill v. Bosma* (1993), *Schick v. Ferolito* (2001), *Monk v. Phillips* (1998), *Allen v. Donath* (1994), *McElroy v. Walsh* (2008), *Campbell v. Picceri* (1996), *Gyuriak v. Millice* (2002), *Dilger v. Moyles* (1997), *Koh v. Village Greens of Woodbridge* (1987), *Gellman v. Seawane Golf & Country Club, Inc.* (2005), *Alexander v. Tullis* (2006), *Auito v. Clarkston Creek Golf Club, Inc.* (2004), and *Maxwell v. Rowe* (1998) are some examples where a discussion of reckless misconduct played a role in the courts’ decision. In many cases, reckless misconduct was usually determined based on whether the defendant had a duty to warn. Generally, there is no duty to warn if the player’s shot is not within their “zone of risk” or where they expect to hit the ball; however, the course does have a duty to warn of known dangers through signage.

Duty to warn, foreseeability, and zone of risk. Duty to warn, foreseeability, and zone of risk were the most intertwined concepts in this study. The questions of whether a golfer was responsible for alerting others before or after hitting a shot or whether a course had the duty to warn of certain course conditions emerged repeatedly. Based on a wide variety of circumstances, this study cannot provide a straightforward answer. However, in determining a duty to warn, “the court also relies on a concept of foreseeability” (Hurdzan, 2018, p. 60).

Foreseeability is essentially the predictability that something will occur. The decision of many cases in this analysis depended on if the damages incurred were predictable. In *Stern v. Easter* (2012), a woman sued a golf course after she was struck while enjoying coffee at a neighboring business. Upon discovering the business had experienced a similar situation only twice in more than 15 years, the court ruled the incident was too infrequent to warrant an unreasonably dangerous condition; the risk was not foreseeable. In *Summy v. City of Des Moines* (2006), a golfer was hit in the eye by a player on an adjacent hole. When the course was designed, trees were installed between the two fairways to protect from errant balls. However, the trees died to disease and were never replaced. Experts hired by the plaintiff claimed the injury was foreseeable due to the lack of trees between the holes.

Foreseeability can also refer to a player’s propensity to hit a certain type of shot, outlining an assumed zone of risk. For instance, if a right-handed player is known to



slice his driver, it is foreseeable he may hit someone standing on the right side of the fairway. Generally speaking, a player has the duty to warn when someone is within their foreseeable zone of risk. *Hoffman v. Polsky* (1965), *Hollinbeck v. Downey* (1962), *Thomas v. Wheat* (2006), *Hernandez v. Ong* (2002), *Schmidt v. Youngs* (1996), *Cook v. Johnston* (1984), *McElroy v. Walsh* (2008), *Koltes v. St. Charles Park Dist.* (1997), and *Bartlett v. Chebuhar* (1992) are all examples where a player's zone of risk determined the outcome of the case. For example, in *Cook v. Johnston* (1984), a golfer with a known propensity to shank the ball hit another player in his group. A "shank" is when someone hits the ball directly (often 45-50 degrees) to the right of the target line. Johnston had struggled with the shanks for many years, to the point where he had taken lessons to correct the problem. This meant the risk was foreseeable and his zone of risk was wider to the right of his target line. After shanking a shot, Johnston yelled "fore" to warn his group members. Cook reacted by turning toward the defendant, causing him to be struck in the eye. The central argument of the case was whether Johnston had the responsibility before hitting the shot to warn the other golfer he was in his zone of risk, increasing the likelihood of injury. Ultimately Johnston won the case because it could not be definitively proven if Cook was in his zone of risk. Many of these cases bring up the same point: if golfers could be sued every time they hit an errant shot, few golfers would play. A player's zone of risk may be difficult to accurately define, and no one is capable of playing a perfect round of golf or hitting the ball on the intended line of flight every time.

Injuries, Lawsuit Decisions, and Time Trends

Forty percent of cases in this analysis resulted from incidents between different groups on different holes on the golf course—essentially where a ball from a golfer on one hole struck a player on another hole. The Patron subcategory emerged within each of the larger categories (On Course, Off Course, and Course Premises) and injuries to the head and eye were the most prevalent (66%).

This analysis included cases where the party that incurred damages sued the golfer who struck the ball and/or the golf course where the incident occurred. Thirty-two of the 85 lawsuits in the final dataset were lawsuits against a golf course, and the injured party prevailed in 50% of such cases. Most decisions in favor of the golf course cited the course did not breach its duty to provide reasonably safe conditions, and in other cases, the incident that caused the injury was too infrequent to be foreseeable. The most common issues identified in cases that ruled against the course were improper design (29%) and the creation of an unsafe condition (23%).

The number of lawsuits per year throughout the 60-year period of this analysis is shown in Figure 2. On average, roughly two golf ball-related injury lawsuits were heard per year. No cases were cited in 2018, 2015, 1999, 1988, 1986, 1975, 1971, 1964, or 1961. The year that recorded the most lawsuits was 2006 with six cases.



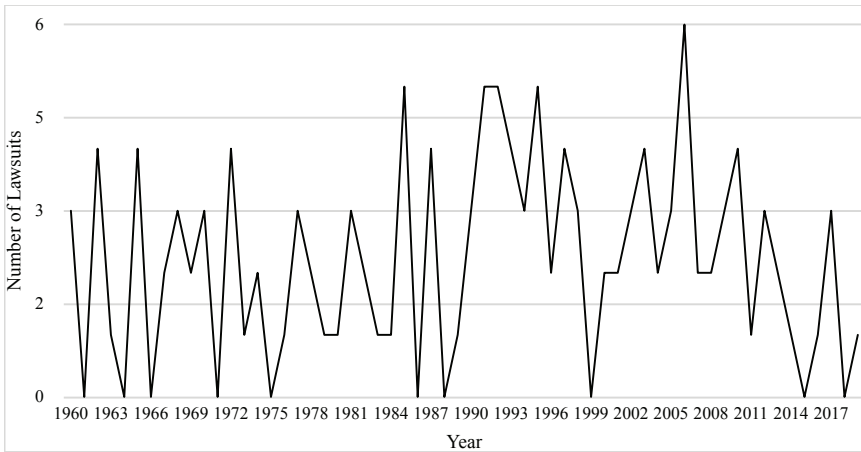


Figure 2. Golf ball injury lawsuit frequencies.

Note. This figure displays the number of negligence cases, analyzed in this study, related to golf ball injuries each year from 1960-2019.

Discussion

The scenarios discussed previously, whether common or otherwise, show how risky a golf course can be for people and property. Most errant shots are an opportunity for injury or property damage, and all players mishit shots regardless of their skill level. It is impossible to eliminate error from golf, but the risk that poor shots pose can often be better managed through buffer zones. A proper buffer zone could have potentially protected against damage in 73 of the 85 (86%) identified relevant cases. This figure does not consider the fact that “about 95 percent of pending lawsuits end in a pre-trial settlement” (thelawdictionary.org, n.d., para. 4). Therefore, this study only examined approximately 5% of the cases and only presents a snapshot of relevant incidents.

The study was created to fill a gap in the literature and to provide useful information for golf practitioners when considering buffer zones for golf. Cases relevant to buffer zones in the On-Course category included incidents between different groups on different holes and patrons on the course. Off-Course cases included property damage to both vehicles and homes, and injuries to patrons and residents. Course Premises cases included lawsuits in the patron and parking lot subcategories.

Findings and Interpretations

Overall, the most common cause of injury was interactions between different groups on different holes within the confines of the golf course—essentially situations



where a golfer incurred injury from another golfer's ball. Patrons (pedestrians, spectators, caddies, employees, and trespassers) were injured in each of the larger categories. Head and eye injuries accounted for 66% of those reported. This is no surprise considering the incident that inspired this study involved a woman being struck in the eye by Brooks Koepka's errant drive at the 2018 Ryder Cup. Eye and head injuries pose a threat specifically to golfers over 65 years old, a sector of the golf population that continues to increase (National Golf Foundation, 2019c). Many eye injuries resulted in loss of vision in one eye like in *Davis v. Peterson* (1990), *Thomas v. Shaw* (1962), and *Johnson v. City of Detroit* (1977). Some head injuries caused mild issues, while others caused permanent damage as seen in *Gant v. Hanks* (1981) where the injury resulted in physical impairment and epilepsy.

The cases in this analysis included incidents where damage was the result of being struck by an errant golf ball. Vehicle or property damage alone were cited in 19 of the 85 cases. *Yemel'Yanov v. Tomlinson Black North, Inc.* (2003) and *George v. Teare* (2000) both included claims of more than 200 golf balls causing damage, and approximately 1,000 golf balls caused damage in *Bechhold v. Mariner Properties, Inc.* (1991). Regardless of the circumstances in each case, the frequency of errant golf balls could lead to recurrent injuries and diminished property value.

Many of the Off Course cases pertained to a property adjacent to a golf course. Realtor misrepresentations of golf ball risks, course redesign implications, and the duty to provide reasonably safe conditions were the topics discussed in these cases. The concerns raised in many of these incidents pertained to the extent a homeowner assumes the risk of living next to a golf course and defining the line of a golf course's duty to adjacent property owners. According to *Ellery v. The Ridge Club* (2005), "generally, the owner/operator of a golf course has a duty to use reasonable care in light of all the circumstances to protect abutting property owners from the golf course's operations" (p. 18). To determine liability, five factors must be considered: (1) whether the property owner was aware of the golf course upon moving in or purchasing the property; (2) the frequency of balls entering the property; (3) the location of the property in relation to activity on the golf course; (4) actions taken to address the problem; and (5) rationality of the actions taken in regard to the risks (p. 18).

While most of the issues identified in this analysis existed between golfers, "carelessness on the part of a golf manager, for whatever reason, can and does cause accidents and injuries" (Sawyer, 2004, p. 37). In nearly half of the lawsuits in this analysis, a golf course was sued for personal injury or property damage resulting from an errant ball, and in 47.5% of these cases the golf course was held liable for damages. Essentially, this study suggests if someone sues a course after being hit by an errant golf ball, there is an equal chance the course will win or lose the case.

Golf managers cannot ignore the threat that errant shots pose because every mishit shot is an opportunity for injury or property damage and subsequent litigation.



A golf manager may discount errant shots because they believe someone assumes the risk of being struck by a golf ball when on or near a golf course. However, that viewpoint is not supported by this study's findings. A golf course was sued in 40 of the 133 total cases, and 32 of the 85 buffer zone likely preventable cases in the final dataset. Assumption of risk doctrine barred the recovery of damages in only six of the 21 cases that favored the course and three of the 19 that ruled against the golf course. Most cases with an assumption of risk defense hinged on whether the course had a duty to protect or warn participants based on foreseeability, improper design (most often related to creating or ignoring dangerous conditions due to lack of barriers), and failure to warn. In most cases where the course won, it was found to not be negligently designed and injuries were not foreseeable. Conversely, in most cases when the course lost, it was found that the course's design either created or ignored a dangerous condition. Such conditions can often be resolved if prevention measures are in place, some as simple as signage. Therefore, the notion that assumption of risk doctrine alone can substitute for proper buffer zones is inaccurate. Depending on the circumstances, buffer zones may remedy design flaws or create reasonably safe conditions to avoid damages that leads to litigation.

Recommendations for Practitioners

One of the purposes for conducting this research was to provide information practitioners can use. The following recommendations are practices managers can implement to understand and manage the risks associated with inadequate buffer zones. The suggestions presented in this section are beyond basic risk management practices that should already be implemented by prudent professionals. For example, signage, employee training, and safety procedures are essential for practitioners to maintain a safe environment. Appropriate assumption of risk documents such as waivers, releases, and informed consents should be used for players, spectators, and homebuyers. Golf course managers and club professionals can proactively strengthen their assumption of risk defense by simply implementing common risk management strategies in conjunction with the recommendations that follow.

Know your clientele. Hurdzan (2018) states, "Risk management recognizes that there are various groups of reasonable people who may come in contact with a golf course property, but each would be expected to act differently in dealing with risks" (p. 32). Most injuries occurred between golfers on the course, but the second largest group of people who incurred injuries were patrons, which included pedestrians, spectators, caddies, employees, and trespassers. This requires managers to consider risk management practices that cater to the diversity of golfers and patrons on the course, course premises, and surrounding areas.

An underlying theme exposed in this analysis supports the claim that skills and experience impact everyone's ability to appreciate risks. A relationship between skill



and prevalence in errant shots exists; highly skilled golfers have a narrow zone of risk because they are more consistent and possess more ability to control their golf ball. In comparison, less skilled golfers have a larger zone of risk, meaning more opportunities to cause personal injury or property damage. Therefore, the first suggestion is for managers to make an extra effort to understand their clientele. Knowing your clientele can help identify shot patterns and trends within the customer base that expose where buffer zones should be placed.

One way to gather customer information is to request golfers complete a short questionnaire when they sign in for a tee time and ask members to update their profile once a year. The questionnaire could ask simple questions about players' age, handicap, and experience. Questions regarding club membership and hometown could be added if appropriate, and an online database could be used to keep track of members over the years. Although this information does not provide a complete picture of the customer base, it can serve as a starting point to understand the experience of those using the course. Knowing where your customers are from also gives you a comparison tool. For example, many players keep track of their scores and handicap index using the USGA Golf Handicap Information Network (GHIN) database. A player's GHIN info and handicap index is available to the public; essentially, anyone can look up a player's GHIN information and get a snapshot of how skilled the player is. Pairing this database with the demographic data can give managers an idea of who to cater to in their risk management strategies. If most members at the course live in the area, they likely are familiar with the course and play it frequently. If these players also have low handicaps, a manager can infer that most people playing the course are not only familiar with it, but also reasonably skilled.

Identify areas where buffer zones should be located. Although golfer shot patterns cannot be predicted, drawing inferences from gathered customer information can be used to identify areas where buffer zones are necessary. For example, age and experience typically impact how far a player hits their driver. If most golfers on a course are seniors who play regularly, it can be inferred these players are not likely to hit a tee shot into a resident's yard that is 280 yards from the tee box and far from the center of the fairway. Likewise, if the same course has a large population of inexperienced young adults, the same yard may be a common landing area for errant shots.

Examining past incidents, speaking with surrounding residents, and on-course observation can also provide insight into areas that need buffer zones. A record of issues in the past can be used to identify locations necessitating buffer zones. If this information is unavailable, accident reporting procedures could be implemented. A community survey or brief one-on-one conversations can provide homeowner perspective. Although this process would be labor intensive from a feasibility standpoint, it provides an opportunity for the course to build rapport with the community.



On-course observation is another method that can expose riskier areas. A creative way to do this would be to set up a temporary concession stand visible to an area presumed to be dangerous. The employee could keep track of landing areas while also selling refreshments.

Supervise and monitor course conditions. “Once the golf course invites golfers, it becomes incumbent on the golf course operations staff to continually observe how the golf course is used and to be proactive in reducing the dangers for those users, by continuing the risk management process” (Hurdzan, 2018, p. 22). Although some degree of supervision is typically imperative anyway, managers should highly prioritize overseeing personnel to make sure the course conditions are appropriate. Many golf courses rely on players to identify problems on the course. However, a typical round of golf lasts at least four hours and with all the distractions present on the course, it is likely golfers will not remember or notice something to alert course staff. A unique way to supervise and monitor conditions would be for head professionals/managers to play the course themselves semi-regularly so they can get a true picture of conditions on the course. This could also build relationships with members outside of the clubhouse and provide an opportunity to identify issues otherwise unnoticed.

Make changes to the course as necessary. Most courses make simple changes based on participants in a tournament or everyday leagues. These changes may be small, such as moving a pin to an easier location on the green or moving tees to even the playing field. The motivation behind these adjustments typically stems from increasing pace of play, but other modifications can be made to avoid some of the issues identified in this study. Off-course injury occurred due to errant shots from a nearby hole in *Sierra Screw Products v. Azusa Greens, Inc.* (1979), in which the court ruled the only way to remedy the risk of errant shots would be to redesign the hole. Despite the negative connotation, redesign does not necessarily mean tearing up a hole and starting over. Something as simple as moving out-of-bounds stakes can (consciously or subconsciously) discourage golfers from attempting shots that could possibly injure others. Property damage was a concern in *Malouf v. Dallas Athletic Country Club* (1992). Homeowners sued Dallas Athletic Club for damages incurred from golf balls striking their vehicles while parked at their homes. Dallas Athletic Club recognized this was a common issue and redesigned the sixth hole to make golfers aim away from the homes. The course took the following measures to redesign the hole:

1. Commissioned Jack Nicklaus to redesign the course.
2. Held meetings about the redesign, specifically in changing hole number six to aim the golfer left.
3. Moved the fairway approximately 20 to 30 yards left.
4. Moved the tee box and changed its direction to point left.



5. Moved the member's tees up and aimed left.
6. Added mounds, berms, and a sand bunker approximately 100 yards from the tee box. The mounds and berms run the length of the cart path, which is between the fence line and the alley and the homes.
7. Planted trees.
8. Moved all hazards from the left side to the right side.
9. Planted six-foot tall photinias. (*Malouf v. Dallas Athletic Country Club*, 1992, p.5)

Some of the methods employed in *Malouf* were simple and cost-effective, such as moving the member's tees. This free and quick fix often involves moving wooden or metal markers from the ground and relocating them to another location on the tee box. However, significant redesign measures such as moving the fairway or moving the tee box can be costly and time-consuming. *Malouf* serves as the perfect example of the variety in course redesign measures; changes can be made to every course regardless of budget or complexity.

Limitations and Future Research

There are limitations that must be considered in all research. In this study, data were not cross-validated—a single researcher conducted the analysis. This is the first study of its kind within academia and the golf industry, limiting the ability to compare results with other related research findings. However, an intercoder reliability measure such as Cohen's Kappa would add methodological rigor and trustworthiness, and the use of computer-aided content analysis would have made this analysis more robust. The scope of this analysis is also limited due to the availability of lawsuit information accessible to the public. Approximately 95% of lawsuits settle out of court (thelawdictionary.org, n.d.), so this analysis only considers about 5% of the errant golf ball-related incidents that occur. Additionally, this analysis does not include instances unreported by players.

Further exploration is needed in this area because golf-specific risk management research is limited in the literature. Past litigation can provide ideas to solve problems, but an ever-changing golf population requires practitioners and researchers to evaluate current issues as well. Both qualitative and quantitative follow-up research could contribute to this unexplored area of study. Although it is beyond the scope of this study, the results of this research could be recategorized or reorganized based on case law. This would further contribute to the literature and also provide a perspective more focused on litigation rather than on scenarios and themes as applied to practitioner risk management methods.

A deeper understanding of practitioner training in risk management gained through interviews could provide another viewpoint of the issues discussed in this



study. Having customers mark areas on a map where they frequently lose golf balls or encounter other groups could be conducted in a focus group or with customers as they complete their round. Quantitative accident reporting procedures with a large sample could also provide additional perspective. A field study measuring actual errant golf shots could be conducted using a TrackMan launch monitor to track common landing areas and identify where buffer zones are needed.

What Do These Results Mean for Buffer Zones?

As discussed in the literature review, every sport has inherent risks, and buffer zones are not a one-size-fits-all solution to avoid participant and spectator injury. Golf courses present “a very complex risk management environment because it is being used by many types of people with varied experiences in recognizing and dealing with risks” (Hurdzan, 2018, p. 32). Buffer zones in golf are not only based upon features of the course, but also features of the clientele. However, it is impossible to implement buffer zones that fit every golfer on the course due to the diversity in the golf population and layout of golf courses. Buffer zones may change based on circumstances surrounding the activity, and the results of this study provide insight into the various situations that pose a threat of litigation within the golf industry.

Buffer zone spaces cannot always be created, especially when courses are surrounded by neighborhoods and roadways, or the funds are not available to make significant course adjustments. However, other strategies can be implemented to manage the risks associated with errant golf shots. Trees are regarded as “‘good safety buffers’ that provide shade and aesthetic value” (Hurdzan, 2005, p. 9), but attracted animals and insects must be considered. Nets also serve as buffers and are commonly used around driving ranges but require proper installation and maintenance. Fences are also another option but aren’t always practical financially and aesthetically. Lastly, ponds and bunkers strategically placed can stop balls from bouncing into other fairways or onto cart paths despite their cost of construction. Regardless of the strategy, placing a buffer in the correct location is important. Most injuries in this analysis resulted from on-course golfer-to-golfer incidents, meaning knowing where customers are likely to mishit shots is the first step in determining the type and location of buffers needed.

There are many reasons why courses aren’t implementing risk management procedures such as buffer zones. Head golf professionals and managers at public and semi-private courses often have time and budgetary constraints that impact day-to-day operations, putting risk management on the back burner. At private courses, members often have the power to control assets through committees and boards, adding additional pressure for golf professionals to use resources wisely. Regardless of the course type or organizational structure, relying on transferring risk through most insurance policies is not enough protection. Settlements can cost a course thousands



or even millions of dollars, which would be devastating for an under-insured course already threatened by the seasonality of the golf business.

Beyond further research, collaboration between golf governing bodies, practitioners, and buffer zone experts could lead to the development of industry-wide buffer zone recommendations to reduce potential injuries and lawsuits similar to those discussed in this study. Cooperation between these experienced groups is important to fully understand and remedy the problem posed by a lack of buffer zones in recreational golf. Identifying why buffer zones are not adopted or other practical or political reasons for the lack of priority could be uncovered through collaboration between these groups combined with future research. Seidler (2006) states “for persons without the proper background and understanding of the unique aspects of sport and recreation facilities, many opportunities for mistakes exist that may lead to increased problems related to safety, operations, and staffing” (p. 32). Strict policies or standards requiring changes to golf courses are not feasible; however, suggestions provided by trusted professionals can guide managers to make prudent decisions.

As mentioned previously, the 133 cases in this study’s dataset only represent approximately 5% of lawsuits that are reported (thelawdictionary.org, n.d.). According to those figures, approximately 2,527 cases have settled out of court, meaning nearly 2,660 incidents actually occurred during the 60-year period studied in this analysis. The National Golf Foundation (2022) reported approximately 14,000 golf facilities existed in 2022. Consistent with these statistics, nearly one in five golf courses will be sued or involved in a lawsuit at some point. Expensive legal fees and court costs alone could make a lawsuit devastating to most golf courses, especially those with limited resources.

Golf courses sued for personal injury or property damage resulting from an errant ball were held liable in 47.5% of the cases studied, meaning a golf course had nearly a 50/50 chance it would lose the case. Given the likelihood of litigation and potentially high-dollar losses, golf courses must ask themselves if a lack of buffer zones is worth the risk. The cost of trees, nets, fences, or other design features, and the time it takes to implement risk management practices often pale in comparison with the risks associated with going to court. Every course has a chance of being sued, but proper buffer zones are a preventative risk management strategy that can mitigate participant injury and lower liability before an incident even occurs.

References

- Alexander v. Tullis*, Not Reported in N.E.2d (Ohio Ct. App. 2006).
- Allen v. Donath*, 875 S.W.2d 438 (Tex. Ct. App. 1994).
- American Society of Golf Course Architects. (2018). [Interactive map]. *Course of the future*. Retrieved from <https://asgca.org/course-of-the-future/>
- American Society of Golf Course Architects. (2020). *Resources*. American Society of Golf Course Architects. <https://asgca.org/resources/>



- Auito v. Clarkston Creek Golf Club, Inc.*, N.W.2d (Mich. Ct. App. 2004).
- Baker v. Mid Maine Med. Ctr.*, 499 A.2d 464 (Me. 1985).
- Baker v. Thibodaux*, 470 So.2d 245 (Louis. Ct. App. 1985).
- Bartlett v. Chebuhar*, 479 N.W.2d 321 (Iowa 1992).
- Bechhold v. Mariner Properties, Inc.*, 576 So. 2d 921 (Fla. Dist. Ct. App. 1991).
- Beers v. Brown*, 129 P.3d 756 (Or. Ct. App. 2006).
- Blommaert v. Borger Country Club*, Not Reported in S.W.3d (Tex. App. Apr. 3, 2014).
- Campbell v. Picceri*, 5 Mass.L.Rptr. 449 (Mass. Super. June 28, 1996).
- Chochran, A. J. & Farrally, M. (2005). *Science and golf II: Proceedings of the World Scientific Congress of Golf*. Taylor & Francis.
- Clawson v. Stockton Golf & Country Club*, 220 Cal. App. 2d 886, 34 Cal. Rptr. 184 (Cal. Ct. App. 1963).
- Cook v. Johnston*, 141 Ariz. 589, 688 P.2d 215 (Ariz. Ct. App. 1984).
- Curran v. Green Hills Country Club*, 24 Cal. App. 3d 501, 101 Cal. Rptr. 158 (Cal. Ct. App. 1972).
- Danaher v. Partridge Creek Country Club*, 323 N.W.2d 376 (Mich. Ct. App. 1982).
- Davis v. Peterson*, Not Reported in N.W.2d (Minn. Ct. App. 1991).
- Dilger v. Moyles*, 54 Cal. App. 4th 1452 (Cal. Ct. App. 1997).
- Dougherty, N., & Seidler, T. (2007). Injuries in the buffer zone: A serious risk-management problem. *Journal of Physical Education, Recreation & Dance*, 78(2), 4-7
- Dunn, III v. Eastover Country Club*, 929 So. 2d 766 (La. App. 2006).
- Ellery v. The Ridge Club*, Not Reported in N.E.2d (Ohio Ct. App. 2005).
- Foote v. Feldman*, Not Reported in A.2d, 1994 WL 651860 (Conn. Super. Ct. Nov. 8, 1994).
- Gant v. Hanks*, 614 S.W.2d 740 (Mo. Ct. App. 1981).
- Garner, B. A. (Ed.) (2019). *Black's law dictionary*. Thomson Reuters.
- Gellman v. Seawane Golf & Country Club, Inc.*, 24 A.D.3d 415, 805 N.Y.S.2d 411 (NY 2005).
- George v. Teare*, Not Reported in N.E.2d, 12 Mass.L.Rptr. 274 (Mass. 2000).
- Golf Channel Digital. (2018, October 1). Fan hit by Koepka drive says sight gone in eye. Golfchannel.com. Retrieved from <https://www.golfchannel.com/article/golf-central-blog/fan-hit-koepka-drive-says-sight-gone-eye>
- GOLF Editors. (2019). GOLF's 60th anniversary: A look back at the events that made the 1960s. GOLF.com. Retrieved from <https://golf.com/news/features/golf-60th-anniversary-look-back-1960s/>
- Goodner, J. R., Moran, F., & Gillmeister, H. (2017) Golf. *Encyclopedia Britannica online*. Retrieved from <https://www.britannica.com/sports/golf>
- Graham, J. D., & Rhomberg, L. (1996). *How risks are identified and assessed*. ANNALS, AAPSS, 545, May 1996.
- Grisim v. TapeMark Charity Pro-Am Golf Tournament*, 415 N.W.2d 874 (Minn. 1987).
- Gyuriak v. Millice*, 775 N.E.2d 391 (Ind. Ct. App. 2002).
- Hall, M., & Wright, R. (2008). Systematic content analysis of judicial opinions. *California Law Review*, 96(1), 63-122. Retrieved from <http://www.jstor.org/stable/20439171>
- Hawkes v. Catatank Golf Club*, 288 A.D.2d 528; 732 N.Y.S.2d 132; (N.Y. App. Div. 2001).
- Hennessey v. Pyne*, 694 A.2d 691 (R.I. 1997).
- Hernandez v. Ong*, No. D038200, 2002 WL 266864 (Cal. Ct. App. 2002).
- Hill v. Bosma*, 1993 Mass. App. Div. 128 (Mass. Dist. Ct. 1993).



- Hoffman v. Polsky*, 386 S.W.2d 376 (Mo. 1965).
- Holbrook v. Muirfield Vill. Golf Club*, No. 81AP-530, 1981 WL 3554 (Ohio Ct. App. 1981).
- Hollinbeck v. Downey*, 261 Minn. 481, 113 N.W.2d 9 (Minn. 1962).
- Hurdzan, M. J. (2005). *Building a practical golf facility: A step-by-step guide to realizing a dream*. American Society of Golf Course Architects. Retrieved from <https://asgca.org/wp-content/uploads/2016/07/Building-a-Practical-Golf-Facility.pdf>
- Johnson v. City of Detroit*, 79 Mich. App. 295, 261 N.W.2d 295 (Mich. Ct. App. 1977).
- Kaplan, S., & Garrick, B. J. (1981). On the quantitative definition of risk. *Risk Analysis* 1(1), 11-27.
- Kaiser, R. A., Cole, T. R., & Moiseichik, M. (2016). Risk management. In M. Moiseichik (Ed.), *Management of park and recreation agencies* (pp. 631-657). National Parks and Recreation Association. Sagamore.
- Kivunja, C., & Kuyini, A. B. (2017). Understanding and applying research paradigms in educational contexts. *International Journal of Higher Education*, 6(5), 26-41.
- Knittle v. Miller*, 709 P.2d 32 (Colo. App. 1985).
- Koh v. Vill. Greens of Woodbridge*, 158 Ill. App. 3d 226, 511 N.E.2d 854 (Ill. Ct. App. 1987).
- Koltes v. St. Charles Park Dist.*, 293 Ill. App. 3d 171, 687 N.E.2d 543 (Ill. App. Ct. 1997).
- Krych v. Bredenberg*, 172 A.D.3d 1884, 98 N.Y.S.3d 772 (N.Y. App. Div. 2019).
- Lee, K., Cho, W., & Seidler, T. (2016). Content analysis of court decisions regarding golf-related injuries. *Journal of Physical Education and Sport*, 16(2), 311-316. <https://doi.org/10.7752/jpes.2016.02049>
- Lexington Country Club v. Stevenson*, 390 S.W.2d 137 (Ky. 1965).
- Lincke v. Long Beach Country Club*, 702 N.E.2d 738 (Ind. Ct. App. 1998).
- Lundin v. Town of Islip*, 207 A.D.2d 778, 616 N.Y.S.2d 394 (N. Y. 1994).
- Mitchell v. WSG Bay Hills IV, LLC*, No. CIV.A. RDB-12-2036, 2013 WL 6502875 (D. Md. 2013).
- Mackenzie, A. (2015). *Golf architecture: Economy in course construction and green-keeping*. Coventry House Publishing. (Original work published 1920)
- Madison Golf Club. (n.d.). Safety rules, tips, and policies. Retrieved from <https://www.madison-golfclub.org/Handbook/Safety-Rules.-Tips-and-Policies>
- Martin, N. T., & Seidler, T. L. (2009). Buffer zones and primary assumption of risk. *Journal of Physical Education, Recreation & Dance*, 80(3), 9-11. Retrieved from <http://0-search.proquest.com.library.uark.edu/docview/215761329?accountid=8361>
- Masters v. Burton*, No. 2D CIV. B234555, 2013 WL 3866516 (Cal. Ct. App. 2013).
- Maxwell v. Rowe*, No. 97CA0075, 1998 WL 663228 (Ohio Ct. App. 1998).
- McDonald v. Huntington Crescent Club, Inc.*, 152 A.D.2d 543, 543 N.Y.S.2d 155 (N.Y. 1989).
- McElroy v. Walsh*, No. G038211, 2008 WL 2058169 (Cal. Ct. App. 2008).
- McGuire v. New Orleans City Park Imp. Ass'n*, 835 So. 2d 416 (La. 2003).
- MEC Leasing, LLC. v. Jarrett*, 343 Ore. 555; 173 P.3d 832 (Ore. 2007).
- Milligan v. Sharman*, 52 A.D.3d 1238; 859 N.Y.S.2d 827; (N.Y. App. Div. 2008).
- Moiseichik, M. (2014). Methods of government negligence protection for provision of physical activities. *Journal of Legal Aspects of Sport*, 24, 43-61.
- Morgan v. Fuji Country USA, Inc.*, 34 Cal. App. 4th 127, 40 Cal. Rptr. 2d 249 (Cal. App. Ct. 1995).
- Mumcu, C., Fried, G., & Liu, D. (2019). Buffer zone: Policies, procedures, and reality. *Journal of Legal Aspects of Sport*, 29(1), 86-11.
- National Golf Foundation. (2019a). *Golf industry facts*. Retrieved from <https://www.ngf.org/golf-industry-research/#golf-course-supply>



- National Golf Foundation. (2019b). *Golf industry report* [PDF document]. Retrieved from National Golf Foundation website.
- National Golf Foundation. (2019c). *Golf participation in the U.S.* [PDF document]. Retrieved from National Golf Foundation website.
- National Golf Foundation. (2022). *Golf industry facts*. Retrieved from <https://www.ngf.org/golf-industry-research/#golf-course-supply>
- PGA.com. (2018). *Allied associations*. Retrieved from <https://www.pga.com/pga-america/pga-information/pga-america-allied-associations>
- Prochnow v. El Paso Golf Club, Inc.*, 253 Ill. App. 3d 387, 625 N.E.2d 769 (Ill. App. Ct. 1993).
- Ribaldo v. La Salle Inst.*, 45 A.D.3d 556, 846 N.Y.S.2d 209 (N.Y. 2007).
- Rinaldo v. McGovern*, 78 N.Y.2d 729, 587 N.E.2d 264 (N.Y. Ct. App. 1991).
- Rearдон v. Country Club at Coonamessett, Inc.*, 353 Mass. 702, 234 N.E.2d 881 (Mass. 1968).
- Sawyer, T. H. (2005). *Golf and the law: A practitioner's guide to the law and golf management*. Carolina Academic Press.
- Schick v. Ferolito*, 167 N.J. 7, 767 A.2d 962 (N.J. 2001).
- Schmidt v. Courtney*, 357 S.C. 310, 592 S.E.2d 326 (S.C. Ct. App. 2003).
- Schmidt v. Youngs*, 215 Mich. App. 222, 544 N.W.2d 743 (N.J. 1996).
- Seidler, T. (2006) Planning and designing safe facilities. *Journal of Physical Education, Recreation & Dance*, 5(77), 32-44. <https://doi.org/10.1080/07303084.2006.10597875>
- Sierra Screw Prod. v. Azusa Greens, Inc.*, 88 Cal. App. 3d 358, 151 Cal. Rptr. 799 (Cal. Ct. App. 1979).
- Smillie, A., & Blisset, L. (2010). A model for developing risk communication strategy. *Journal of Risk Research* 1(13), 115-134.
- Stern v. Easter*, 92 A.D.3d 1250, 938 N.Y.S.2d 391 (N.Y. 2012).
- Thelawdictionary.org. (n.d.). *What percentage of lawsuits settle before trial? What are some statistics on personal injury settlements?* Retrieved from <https://thelawdictionary.org/article/what-percentage-of-lawsuits-settle-before-trial-what-are-some-statistics-on-personal-injury-settlements/>
- Thomas v. Shaw*, 217 Ga. 688, 124 S.E.2d 396 (Ga. 1962).
- Thomas v. Wheat*, 143 P.3d 767 (Ok. App. Ct. 2006).
- Tonner, C., Sawyer, T. H., & Hypes, M. G. (1995). Legal issue in golf: A 25 year litigation history 1973-98. *Journal of Legal Aspects Sport*, 9(2), 125-149.
- USGA. (2019). Course rating and slope database. Retrieved from <https://ncrdb.usga.org/NCRDB/>
- USGA. (2020). Rules and interpretations. Retrieved from <https://www.usga.org/content/usga/home-page/rules/rules-2019/rules-of-golf/rules-and-interpretations.html#?ruletype=cp§ion=rule&rulenum=8>
- Vardon, J. (2019) Jason Day's wife accidentally injured by LeBron James in fourth quarter of Cavs win. Cleveland.com. Retrieved from https://www.cleveland.com/cavs/2015/12/jason_days_wife_accidentally_i.html
- Walsh, B. A., Chounthirath, T., Friedenber, L., & Smith, G. A. (2017). Golf-related injuries treated in United States emergency departments. *The American Journal of Emergency Medicine*, 35(11), 1666-1671. Retrieved from <https://doi.org/10.1016/j.ajem.2017.05.035>
- Werne v. Exec. Women's Golf Ass'n*, 158 N.H. 373, 969 A.2d 346 (N.H. 2009).
- Yemel'Yanov v. Tomlinson Black N., Inc.*, 118 Wash. App. 1068 (Wash. Ct. App. 2003).
- Yoneda v. Tom*, 111 Haw. 12; 136 P.3d 288 (Haw. 2006).

