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Paralympic golf movement: the links between inclusion and treating the whole person to regain function

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The patient–physician relationship is often initiated when a patient is not feeling well or is having pain; however, there are other times when this relationship occurs abruptly due to sudden trauma or diseases processes. Unfortunately, some trauma and pathologies may impair the patient, leading to disability. The recovery process may be prolonged and may still leave the patient with lifelong deficits. The four principles of osteopathy [1] help prepare osteopathic physicians to widen their focus beyond treatment of the pathology to help to heal the whole person. The philosophy of osteopathic medicine combines the patients’ structure and function with physical, chemical, biological, behavioral, and social factors into the practice of medicine and surgery [2].

The comprehensive approach to their rehabilitation is not limited to their deficits but also includes the whole person’s physical, mental, and social recovery including community re-integration. Rehabilitation programs that incorporate therapeutic recreation and an adaptive sports program provides awareness of opportunities to enjoy recreational exercise and athletic events. The osteopathic approach is perfectly matched not only to address the full spectrum of care for the recovery of individuals but also by providing them resources to add years to life and to add life to years.

There are clear benefits for participating in exercise and athletic activities. Participation in athletic and exercise activities is universally beneficial, and several publications have made recommendations regarding the efficacy of regular physical activity [3–5]. Athletes with impairments demonstrate improved exercise endurance, muscle strength, cardiovascular efficiency, flexibility, balance, motor skills, and functionality compared with individuals with

impairments who do not participate in athletics [6–13]. In addition to the physical benefits, the psychological benefits of exercise include improved self-image, body awareness, motor development, life skills, mood, and overall quality of life. Athletes with impairments have fewer cardiac risk factors and higher *high-density lipoprotein* (HDL) cholesterol, and they are less likely to smoke cigarettes than those who are disabled and inactive [14, 15]. Individuals with limb deficiencies who participate in athletics have improved proprioception and increased proficiency in the use of prosthetic devices [14, 16]. All of the previously mentioned benefits to the individual demonstrate the need for awareness and access for sports and exercise opportunities for persons with disabilities, and adaptive golf provides an enjoyable low-risk opportunity for such participation.

The re-integration and inclusion back into society can be challenging for these individuals, who are now becoming part of a minority group that feels it is “invisible” and “orphaned” [17–21]. Despite progress with the Americans with Disabilities Act (ADA) becoming law in 1992, there are still deficiencies in this legislature because it only forbids employment discrimination against people with disabilities but only to those individuals who are deemed to be a “qualified individual” [20]. There is an additional lack of clarity with the ADA’s definition of “qualified individual” with the usage of another vague term “reasonable accommodation” [22]. Unfortunately, these challenges for persons with disabilities exist and continue to occur in recreational and competitive sports [23–26]. However, challenging it may consist of developing and implementing policies for inclusion of the minority group of disabled individuals, and there are many individuals who continue to work toward progress.

A potential way to re-integrate persons with a disability into the community is by finding an enjoyable therapeutic recreation. For many individuals, one such outlet is going outdoors and playing golf. Golf is a recreational and competitive sport that encompasses not only “person vs. nature” and “person vs. man” but also “person vs. self.” Golf enables the individual to combine the

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enjoyment of the beautiful serenity of nature while facing the challenges, obstacles, and hazards of the game.

Golf has been increasing in popularity over the past few decades; however, we have witnessed a significant boom in the number of golfers in the past few years. The National Golf Foundation (NGF) reported in 2019 that there was a 1.5% increase in the number of rounds played in the United States to an estimated 440 million [27]. With the COVID-19 pandemic beginning in 2020, people were searching for a recreational activity that was outdoors and provided the safety of social distancing. As a result, the number of golf rounds played in 2020 increased by 13.9%, according to the Golf Datatech 2020 National Golf Performance Report [28]. The trend continued in 2021, and although it could not maintain the pace of the 2020 growth, there was still another 5% increase in the number of rounds with a record 3.2 million new first-time players [29]. Although no statistics were readily available related to golfers with a disability, it would be a natural anticipation that the number of golfers with a disability starting to play golf or playing more frequently would parallel this growth.

The United States Golf Association (USGA) page on Accommodating Golfers with Disabilities states: “Today, most golf facilities open to the public are probably in compliance, or striving to be in compliance, with most of the ADA requirements. Initially, the ADA requirements were met with trepidation. Over time, those feelings have eased with the realization that the compliance requirements for golf courses are not overly burdensome” [30]. Despite having such insensitive comments and resistance to ADA requirements for accommodation, the USGA has been making progress to support adaptive golf.

As part of the governance of the game of golf through writing and interpreting the Rules of Golf, the USGA has worked with The Royal & Ancient Golf Club (RA) to amend the rules to accommodate adaptive golfers [31–34]. The intent for the Modified Rules of Golf for golfers with disabilities (GwD) is to achieve the desired result to allow the golfer with a disability to play equitably with a nondisabled individual or a golfer with another type of disability, similar to weight classes in boxing or wrestling. Additionally, the various modifications need to be altered differently for the different disabilities and have been broken down into five subgroups: players who are blind (visually impaired), players who are amputees (limb deficient), players who utilize assistive mobile devices (wheelchair), players with intellectual disability (Special Olympics), and players with other disabilities [31]. For example, a visually impaired golfer is allowed an aide to assist with the stance, lining up before a stroke, and for advice; however, they are only allowed one aide at a time

but may have both an aide and a caddie. [32] Additionally, there have been modifications to allow certain adaptive equipment such as prosthetics, assistive mobile devices, crutches to assist with balance during stance, as well as braces or a gripping aid to help hold the club [31].

There have been several amazing organizations that have been developed over the past few decades to help GwD play with either players with a similar disability or from other disability groups. These groups include the National Amputee Golf Association (NAGA) [35]. American Disabled Golf Association (ADGA) [36]. Adaptive Golf Association (AGA) [37]. US Adaptive Golf Alliance (USAGA) [38]. United States Blind Golf Association (USBGA) [39] and the Special Olympics [40]. These organizations have helped through development programs and teaching the GwD how to utilize adaptations and play through their disability. Additionally, they have initiated local and national competitions including their own national championships. In 2022, the USGA has added the Inaugural U.S. Adaptive Open in July 2022 at Pinehurst [41]. The U.S. Adaptive Open will include GwD from all the disability groups and will serve as the US national championship of Adaptive Golf [42]. The event follows the development of other such national championships in disabled golf, such as the Disabled British Open in 2009, which was the first such event including a pan-disability field of golfers [43]. The US Adaptive Open will include 96 physically challenged golfers, with at least five male and two female golfers competing in eight categories, including: arm impairment, leg impairment, multiple limb amputee, vision impairment, intellectual impairment, neurological impairment, seated players, and short stature [28]. Eligibility for the US Adaptive Open is open to both amateur and professional golfers with a World Handicap System (WHS) Handicap Index[®] of 36.4 or less and an eligible impairment that is confirmed by a World Ranking for Golfers with Disability (WR4GD) Pass. The USGA selection committee will fill up to 20 spots to assure representation from key demographics. The championship will be contested over 54 holes of medal (stroke) play. Multiple sets of tees will be utilized, and carts will be permitted for all players and caddies [41].

Other signs of progress to help with the advancement of persons with disabilities in sports are the development of a national governing body (NGB) like other Olympic/Paralympic sports as well as a singular Adaptive Golf National Championship that can help lead to the selection of a Paralympic team. USA Golf is the NGB for golf in the United States [44]; however, they do not have a Paralympic division or committee nor do they include a GwD as a member of the Board of Directors or provide any

representation [45]. The lack of representation of this minority group significantly handicaps the population of GwD from inclusion in the US Paralympics and from the addition of Adaptive Golf in the Summer Paralympic Games. It would be encouraging to see USA Golf add a Paralympic division as well as inclusion and representation on the Board.

The International Golf Federation (IGF) is recognized by the International Olympic Committee (IOC) and the International Paralympic Committee (IPC) as the international federation for golf [46]. Unlike USA Golf, the IGF is committed to the development of Para Golf and golf for the disabled (G4D) and has created a GwD committee. The IGF GwD committee serves as an advisory committee and is appointed by the Board. Their key responsibilities include promoting and encouraging participation and accessibility of golf for GwD, encouraging the international development of G4D, and creating a pathway for all GwD to sample, take part, and compete from the club level through to global events. Additionally, it supports and encourages national federations to actively affiliate existing disabled golf organizations and promote the inclusion of G4D into their membership as well as establish and manage an international eligibility/classification system for G4D so that it can develop the bid for golf's inclusion as a sport in the Paralympic Games [44].

There has been progress with international golf events not only for specific disability groups but also for competitions inclusive of all of the disability subgroups [47, 48]. The inaugural World Disabled Golf Championship (WDGC) was held in Japan in 2014. The WDGC hosted GwD from 17 nations and was the first world championship composed of golfers from multiple disability groups. The inaugural WDGC served as the first step in a collaborative approach between nations to have a world championship every 2 years, which is one of the IOC's requirements to consider the entry of golf into the Paralympic Games in the future [47].

After many years of discussion, golf was reinstated on a trial basis, following a 112 year hiatus, to the Olympics in 2016 at Rio de Janeiro. In 1899, the Olympic organizing committee approved the addition of golf for the 1900 Olympic Games in Paris, and the competition included 22 golfers. Unfortunately, the golf competition only lasted for two summer games due to the cancellation of golf following the 1904 Summer Games in St. Louis, which had an increase in the number of golfers to 77 (which included a women's nine-hole event). A disagreement over the format for the 1908 Summer Games in London led to the competitors from the United Kingdom to withdraw and a plan to cancel the event. However, the defending

champion, George Lyon from Canada, participated as the sole competitor and was offered the gold medal but he declined [49]. The growing popularity of golf worldwide led to the reinstatement to the Summer Games, but there was not universal support. The initial request for the inclusion for the 2012 Olympic Summer Games was voted down. There was some controversy over the decision because some of the sports superstars felt that it would dilute the game and take away from the Majors, whereas others felt it would add another pinnacle event for competition once every 4 years. The next presentation to the IOC included a video from Tiger Woods and in-person presentations by Padraig Harrington and Michelle Wie [50].

Although adaptive golf has yet to develop the deep fan base and television contracts of the PGA and LPGA tours, the rapidly growing participation has been impressive. Adaptive golf has significantly grown over the past decade across the international landscape, which has not only paralleled but also has exceeded the significant growth of golf that has been witnessed during this time. This continued to increase competition and popularity of the sport. The Adaptive Golf National Championships that have been developed in many countries have created a pathway for qualification for the Paralympic Summer Games. These events have enabled competition both within a specific disability group as well as competition across the spectrums of disability groups. The inclusion of multiple adaptive golf organizations in national and international events will provide a strong precedent to support the addition of the event into future Paralympic Games. It will take agreements and a shared approach of the member organizations to make a unified pitch. However, the process for adding Paralympic Golf may still be challenging as witnessed by the process to include both men's and women's golf in the Olympic Games. However, one of the primary differences is that unlike golf, which has long-standing major championships, such as The Masters; this will become the penultimate event for Adaptive Golf in the world.

The route will require the continued grassroots efforts by the individual organizations. However, the medical community can also be a strong advocate and champion the inclusion of these athletes in the Paralympic Summer Games. Physician awareness of local clubs that offer and include adaptive golfers will help expand the base of athletes. Our awareness will provide a pathway for more individuals with disabilities to go outdoors and participate in this low-risk, therapeutic, and recreational exercise and help to improve their overall health, as previously noted. Our advocacy will not only help our individual patients

but also the collective because we treat the whole person medically and psychosocially as the individual re-integrates into community participation. Additional opportunities for advancement can be working with the development of adaptive golf clinics with local clubs and helping to have ADA compliance with the local golf courses.

Beyond our local reach, we can advocate at the state and national level through public and private institutions. We can solicit support from medical organizations to promote adaptive golf for the population with disabilities, and we can work with the United States Olympic & Paralympic Committee (USOPC) in the development of a physician pool for medical care of these individuals. We can work with traditional media outlets as well as utilize social media to create a push for the inclusion of golf in the upcoming Paralympics. The increased visibility will expand the global awareness of the public and will garner additional support of the mission. Lastly, a petition can be put forth to the IPC with the support of all of the golf, medical, and business organizations to advocate for the inclusion of golf and to provide a worldwide platform. The course may be challenging with hazards along the way, but the reward will be great as we add years to the lives of these amazing individuals.

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