

## ORIGINAL RESEARCH (COMPLETED RESEARCH WITH OUTCOMES)

### A DESCRIPTIVE ANALYSIS OF OCCURANCE AND NATURE OF INJURY IN A REGIONAL ADAPTIVE SPORTS COMPETITION

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**Background:** Last year, in 2019, the Endeavor Games for Athletes with Physical Disabilities celebrated its' 20<sup>th</sup> year as a regionally based adaptive sports competition. This event included recreational, competitive, and elite athletes from five different categories of disability and twenty-seven different states. In addition to this regional competition, there are currently over 100 recreational adaptive sports competitions in the United States, with this number growing each year. The widespread growth and increased access to competitions for this population can have a positive effect for those wanting to compete. However, all sport comes with a risk of injury and adaptive sports is no exception. Currently the research on injuries in adaptive sports has focused on elite athletes at elite competitions such as the Paralympics. This focus on elite sports has made it difficult to apply injury information to regional competitions with varying levels and ages of athletes, such as the Endeavor Games. This paucity of evidence makes event preparation and management of injuries in these individuals difficult.

**Purpose:** The purpose of this study is to describe the occurrence and nature of injuries that have been sustained in the Endeavor Games regional adaptive sports competition from the years 2011 to 2019. Information described includes age, disability type, nature of injury, and sport in which injury occurred.

**Methods:** The information collected from this study was obtained retrospectively from the Endeavor Games injury report forms from the years 2011 to 2019. Injury report forms were completed by medical volunteers providing care to the individuals at that time the injury was sustained. Information from the forms was coded to exclude any identifying PHI and included 19 different variables such as disability type, injury type, and age. SAS 9.4 was utilized to run descriptive analysis with a 95% confidence interval for each category in the overall population.

**Results:** In this study there were 91 total injuries recorded. The mean age of injured athletes was 32.4 years of age with a standard deviation of 14.4. More than 50% of injuries were sustained in competition as compared to clinics or non-sport related injuries. Injuries were seen most in the disability categories of limb loss (33%), traumatic brain injury (19.8%), and "other" (12.1%). The sports with the highest injury occurrence were track (14.3) and cycling (11%), followed by non-sport related injuries (9.9%). The most common structures injured were the skin (35.2%) followed by muscle (23.1%), whereas the most common injuries reported were abrasions (19.8%), "other" (18.7%), and strains (17.6%).

**Discussion/Conclusion:** The outcomes from this study describe the most and least common occurrences in each category over the last 8 years at the Endeavor Games regional sports competition. This information can be used for medical volunteer training and supply planning purposes for future regional adaptive sports competitions. The outcomes from this study are unable to provide information on causality or be used in a predictive manner and are limited to this specific population and event. However, they can also be useful in generating hypotheses for future studies on a larger population aimed to be more predictive of injury in regional sports competitions.

**Relevance to Allied Health:** It is the responsibility of allied health professionals to encourage active lifestyles for all our patients, and to also be informed about the risks that a patient may incur if they do decide to participate in sport. Although this research is not predictive, it can give providers and patients an idea of what injuries have occurred in the past for a similar demographic. It can be expanded upon in future studies to encompass a more predictive outcome that will provide more insight into factors that put adaptive athletes into higher or lower injury risk categories to allow allied health professionals the ability to accurately assess patient risk versus reward.