



Cheerleading RIO™ 2006/2007 Summary of Findings

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Note

The analyses presented here provide only a summary of collected data, with the feasibility of a more-detailed presentation limited by the extensive breadth and detail contained in the dataset. The opinions expressed in this document are those of the Center for Injury Research and Policy research team and not necessarily those of any group associated with this study.

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I. Introduction and Background

1.1 Project Overview

Cheerleading-related injuries rose 110% in the United States from 1990-2002.¹ In 2002, there were an estimated 3.5 million cheerleading participants who were ≥ 6 years of age,² and this number has been on the rise ever since. Increases in the number of cheerleading-related injuries have occurred in response to the change from previous cheerleading styles to more gymnastic-type cheerleader skills.^{3,4} Although other sports involve a greater risk of injury compared with cheerleading, cheerleading-related injuries tend to result in greater amounts of time lost because, unlike other sports, cheerleading requires the use of all the extremities and a cheerleader cannot simply tape up a sprain or participate while in a wrist cast.⁵

The majority of cheerleading-related injuries reported in the literature is included with accounts of sports-related injuries in general^{3,6-9} or are in the form of case reports.^{5,10-13} Few epidemiologic studies of cheerleading-related injuries exist in the literature, and there is only one national study to our knowledge.¹ This national study, due to the nature of the dataset used, did not report such important factors as mechanism of injury, type of event during which the injury occurred, type of maneuver being attempted at the time of the injury event, supervision present at the time of the injury event, type of cheerleading team the injured cheerleader was participating on, nor experience level of the injured cheerleader, among many other factors related to the injury event. The present study was designed to address the limitations of the national study.¹

1.2 Background and Significance

RIOTM (Reporting Information Online), a time- and cost-efficient Internet-based illness and injury reporting system, was developed by Dr. R. Dawn Comstock and first implemented in the US to monitor illness and injury at summer camps in summer 2005. Since then, Dr.

Comstock has conducted numerous injury reporting studies using RIO™, including High School RIO™, that monitored 9 high school sports: boys' basketball, girls' basketball, boys' football, boys' soccer, girls' soccer, girls' volleyball, boys' wrestling, boys' baseball, and girls' softball. Cheerleading RIO™ was modeled after Dr. Comstock's RIO™ studies. Based on the success of Dr. Comstock's studies, The Research Institute at Nationwide Children's Hospital decided to fund the pilot year of Cheerleading RIO™. The findings of this pilot study, *Cheerleading RIO™ 2006/2007: An Internet-Based Cheerleading Injury Reporting System*, are summarized in this report.

1.3 Specific Aims

The objective of *Cheerleading RIO™ 2006/2007* was to establish the internet-based reporting system for cheerleading-related exposures and injuries. Specifically, we aimed to:

1. Collect accurate cheerleading exposure data for cheerleading teams
2. Collect accurate injury incidence data for cheerleaders
3. Collect detailed information about each injury event
4. Identify risk and protective factors for cheerleading-related injury
5. Make recommendations for implementation and evaluation of injury preventive interventions

The long-term goal of Cheerleading RIO™ is to reduce the morbidity, mortality, and disability among cheerleaders caused by cheerleading-related injuries through the development and implementation of a permanent internet-based cheerleading-related injury reporting system that will consistently produce quality data on cheerleading-related injuries, exposures, and risk factors.

Using evidence-based science to establish cheerleading safety practices can help to decrease cheerleading-related injuries. Thus, we aim to improve the overall cheerleading experience for cheerleaders and their coaches by providing as safe an experience as possible for cheerleaders.

1.4 Project Design

RIO™ was utilized to collect information regarding cheerleading exposures and cheerleading-related injuries over a one-year period. For the purpose of this study, a reportable injury was defined as an injury that meets ALL 3 of the following criteria:

1. Occurred as a result of participation in an organized cheerleading tryout, warm-up, practice, pep rally, game, or competition, AND
2. prevented the injured cheerleader from participating in cheerleading for the remainder of that tryout/warm-up/practice/pep rally/game/competition, or for a longer period of time, AND
3. required the injured cheerleader to seek medical attention

Medical attention was defined as meeting ALL 4 of the following criteria:

1. Treatment at the scene or at a medical facility, AND
2. is administered at the time of the injury or at a later date, AND
3. is required as a result of the injury, AND
4. is administered by a certified athletic trainer, person trained in First Aid, Emergency Medical Technician (EMT), paramedic, nurse, nurse practitioner, physician's assistant, or physician