

Epidemiology of Elbow Ulnar Collateral Ligament Injuries in National Collegiate Athletic Association Sports: 2009-2010 to 2013-2014 Academic Years

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Introduction

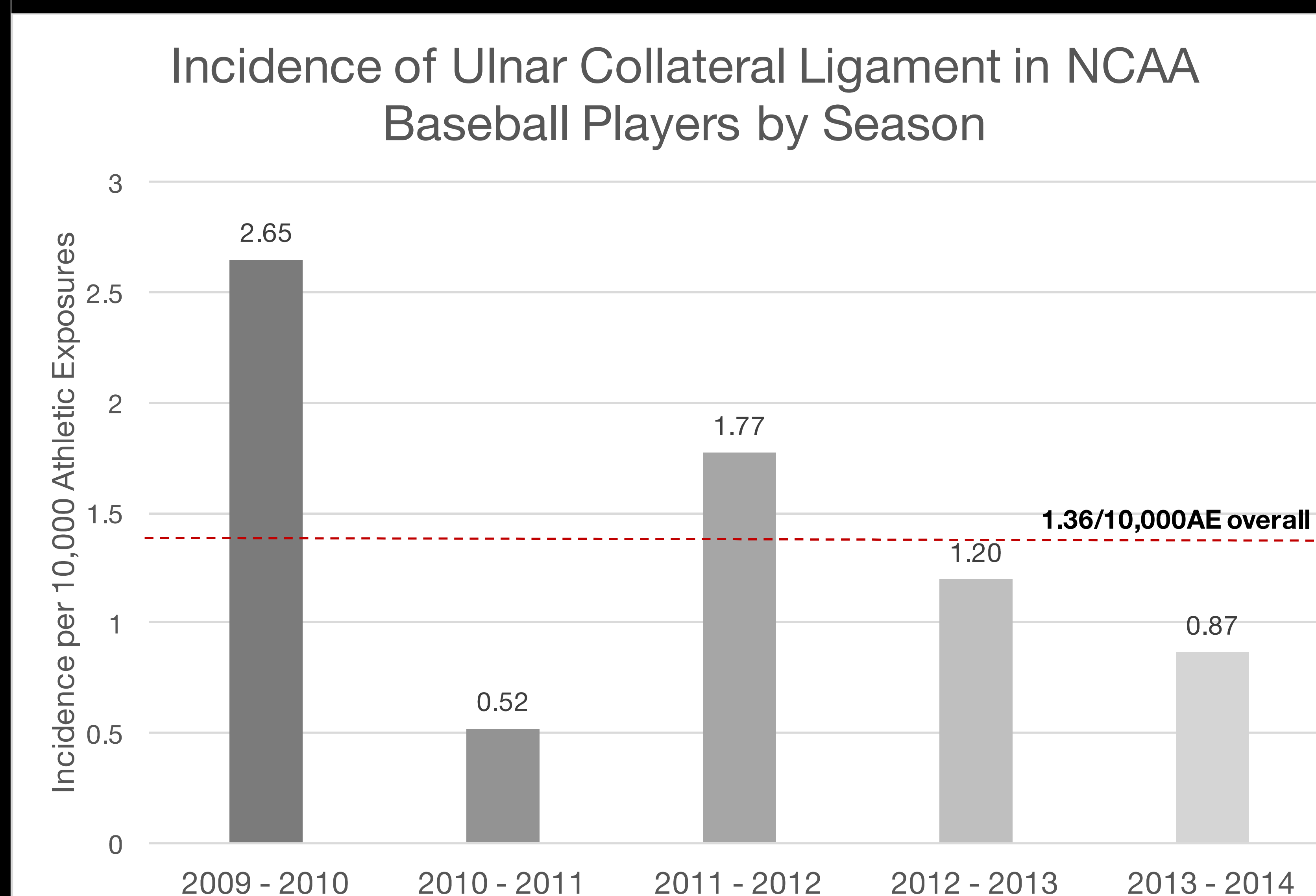
- Injury to the elbow ulnar collateral ligament (UCL) in baseball players can be a devastating injury, especially pitchers
- Injury rates have been variously reported as 1.09 per 1000 athlete exposures in minor league pitchers and 5.8 per 1,000 athlete exposures in college baseball players
- 25% of Major League Baseball (MLB) players and 15% of professional minor league baseball players have reported needing UCL reconstruction.
- Despite the recent increase in UCL tears in MLB players there is a paucity of literature on the recent epidemiological trends in NCAA athletes.

Methods

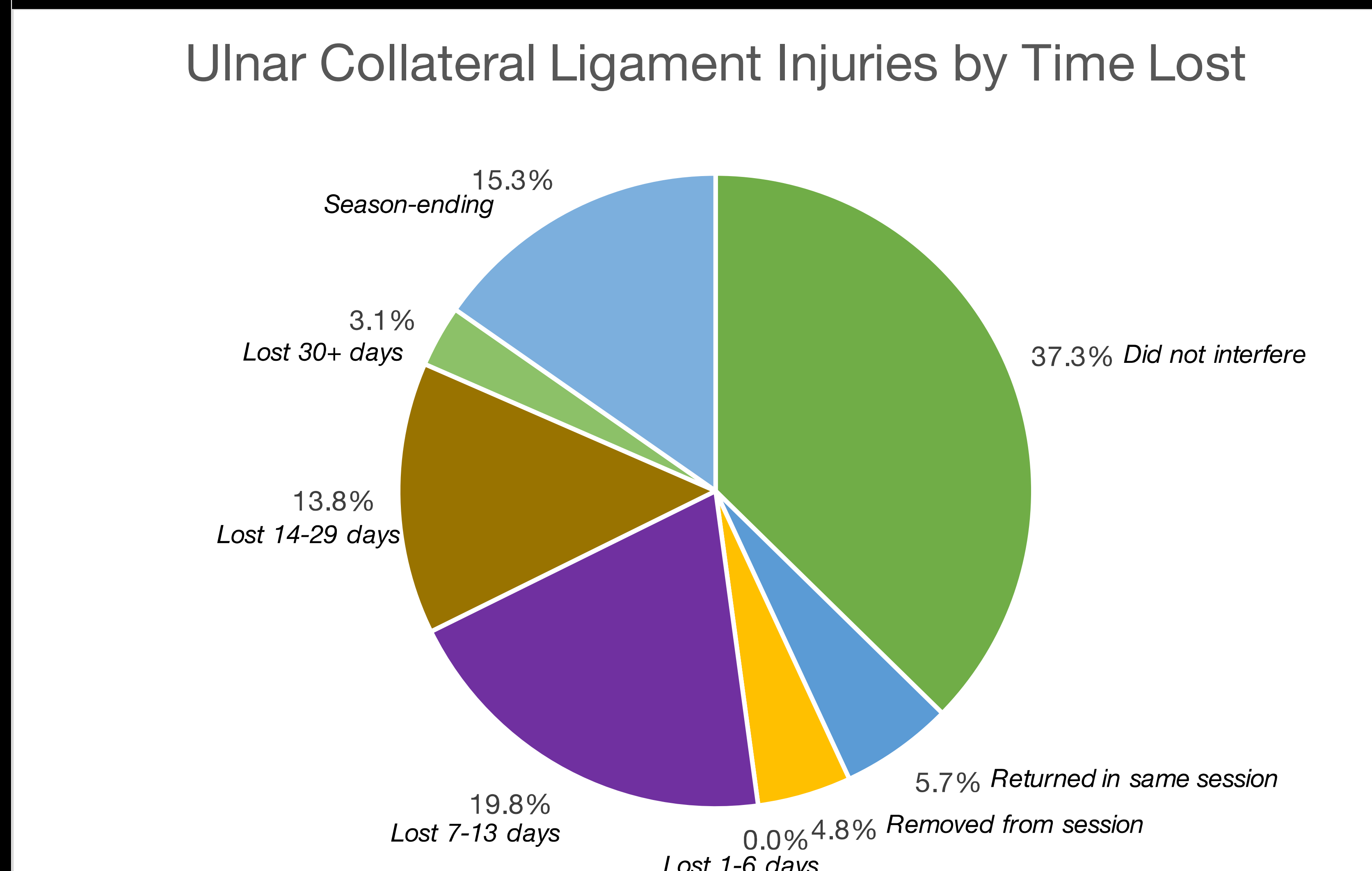
- NCAA and IRB Approval obtained
- UCL injuries in men's baseball from 2009-10 to 2013-2014 in the NCAA Injury Surveillance System (NCAA ISS) database retrospectively reviewed
- Weighted to be nationally representative
- Comparisons included throwing versus non-throwing, early play (warm-up to 3rd inning) versus late play (4th inning on), and competition versus practice
- Incidence per 10,000 athletic exposures (AE)

Results

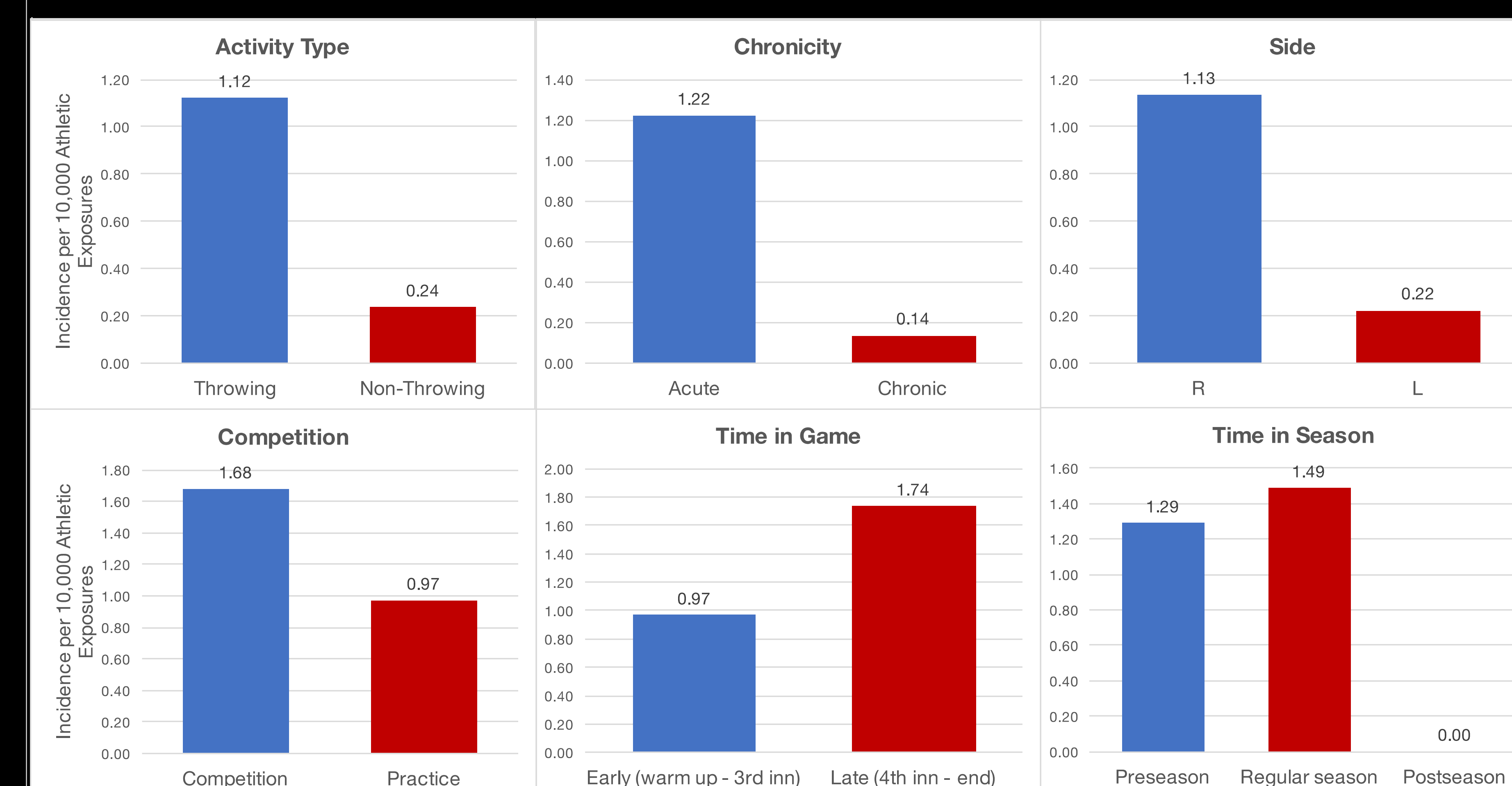
- The incidence of UCL injuries in NCAA baseball players from 2009-2014 was 1.36 per 10,000 athlete exposures (AE)



- Of all players injured, a large number (19.8%) missed 1-2 weeks of competition while 15.3% missed the rest of the season following injury, and 13.3% required surgery



- Injuries more common later in games, with 1.16/10,000 AE after the 4th inning compared with 0.32/10,000 AE early in the game, injury risk ratio of 3.59 (CI 3.37 – 3.9)
- More common during competition; 1.68/10,000AE, compared to 0.97/10,000 AE during practice, RR of 1.73 (CI 1.73-1.73)



Conclusion

- Decrease in the incidence of UCL injuries in NCAA athletes compared to previously published data
- Only 15% of players were sidelined for the season after injury, and only 13% required surgery
- More injuries occur later in games, potentially confirming an association between injury and pitch count in these athletes
- More research is needed specifically in identifying NCAA athletes at risk for UCL injury.