Epidemiology of Injuries in U.S. Women's University Rugby-7's: A Five-Year Analysis

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INTRODUCTION

- The popularity of women's rugby-7's is growing in the United States, especially in the collegiate population.[1]
  - According to the NCAA, women's rugby is considered an "Emerging Sport".[2]
  - In 2019, rugby was a sanctioned sport at 21 U.S. universities, across all three divisions.[3]
- Although rugby injury rates and patterns differ by sex[4], we lack sufficient injury data on the female cohort.
- This study is crucial for identifying injury risk and developing population-specific protocols for the female collegiate population.

RESEARCH OBJECTIVE

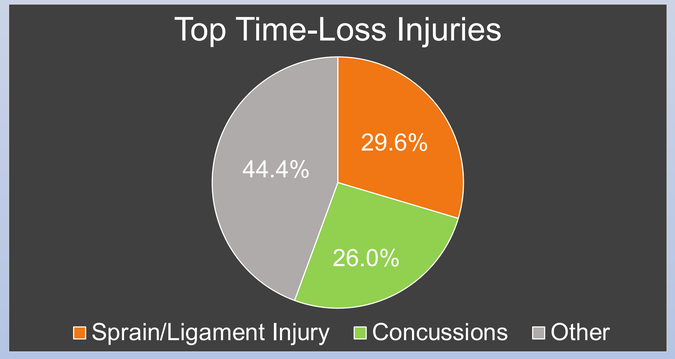
This study's goal was to quantify injury incidence (injuries/1000 playing hours [ph]) and the types and causes of injury for university women in USA Rugby-7s sanctioned events.

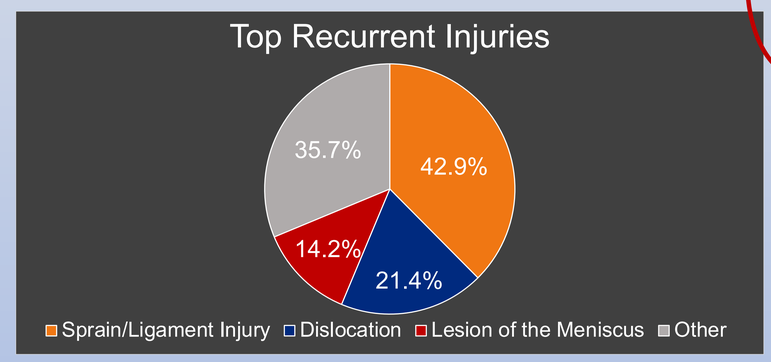
METHODOLOGY

- Five-year prospective epidemiological study (2012-2016) of **1047** female Rugby-7s athletes (mean age = 20.8 years) in **201** USA Rugby 7-a-side sanctioned matches.
- In compliance with the rugby international consensus statement,[5] injury data were collected with the **Rugby Injury Survey and Evaluation (RISE) methodology**[6], an injury surveillance tool.

RESULTS

- Total injury rate was 107.9/1000ph (n=71)
- Incidence of medical attention injuries (48.6/1000ph) and time-loss injuries (41.0/1000ph) did not significantly differ (P=0.52).
- Acute onset (94.4%) > gradual onset (4.2%); **P<0.01**; New (80.3% > recurrent (19.7%); **P<0.01**
- The most common recurrent injuries were: sprain/ligament injuries, dislocations, and meniscus lesions
- The most common time-loss injuries were sprain/ligament injuries and concussions
- The phase of play most commonly associated with injury was the **tackle** (69.0%; n=49)
- Tackle injuries among backs > forwards (90.4/1000ph v. 42.6/1000ph); (**P=0.02**)
- Lower extremity injuries were most common (45.1%)





CONCLUSIONS

- The lack of women's rugby focused data limits proper injury prevention, which should be addressed with our current and future studies.
- Inclusion of lower extremity injury prevention programs in the **warm-up routines** with consistent compliance in **return-to-play protocols** may decrease women's lower extremity injury rates and could help address recurrent sprains and ligament injuries.
- **Tackling and break-fall-post-tackle techniques** should be emphasized in training regimens and may decrease injuries in the tackle, decreasing ligament injuries and concussions. Head positional awareness in the tackle should be a priority for developing players, which may also decrease the incidence of head impacts.
- Tackling biomechanics may be an area to evaluate on how to decrease injury rates in the tackle among women, especially among the backs position.

Injuries By Position

Injury Type	Forwards		Backs		
Time-Loss	n=7	24.8/1000ph	n=17	45.2/1000ph	P=0.18
Medical Attention	n=8	28.4/1000ph	n=21	55.9/1000ph	P=0.09

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