

Concussion assessment tool use and  
premature return to play  
A Retrospective Chart Review

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# Introduction

- Concussions are among the most common sports injury requiring medical care

- Studies suggest up to 40% of patients return to play early, suffering relapse of symptoms
- The American Medical Society for Sports Medicine released a consensus statement in 2012 recommending the use of a standard assessment tool

- SCAT (2004), SCAT2 (2008), SCAT3 (2012), SAC
- Computerized testing

- SCAT3 includes
- Extensive inventory of 22 symptoms, each with a numerical value
- Cognitive testing including orientation, immediate memory, concentration and delayed recall
- Physical exam including strength, balance, coordination, neck ROM and tenderness

# Purpose

- To determine if local data supports the use of standard assessment tools by resulting in fewer instances of premature return to play

# Design

- Retrospective chart review

# Methods

- IRB Approved
- Retrospective chart review of Unity Point Peoria area clinics and Emergency Department from 7/1/2015 to 7/1/2016
- Inclusion Criteria: Dx of concussion, sports activity, age 13 and older
- Exclusion criteria: Patients sustaining major traumatic brain injury, no sports activity, age <13

# Results

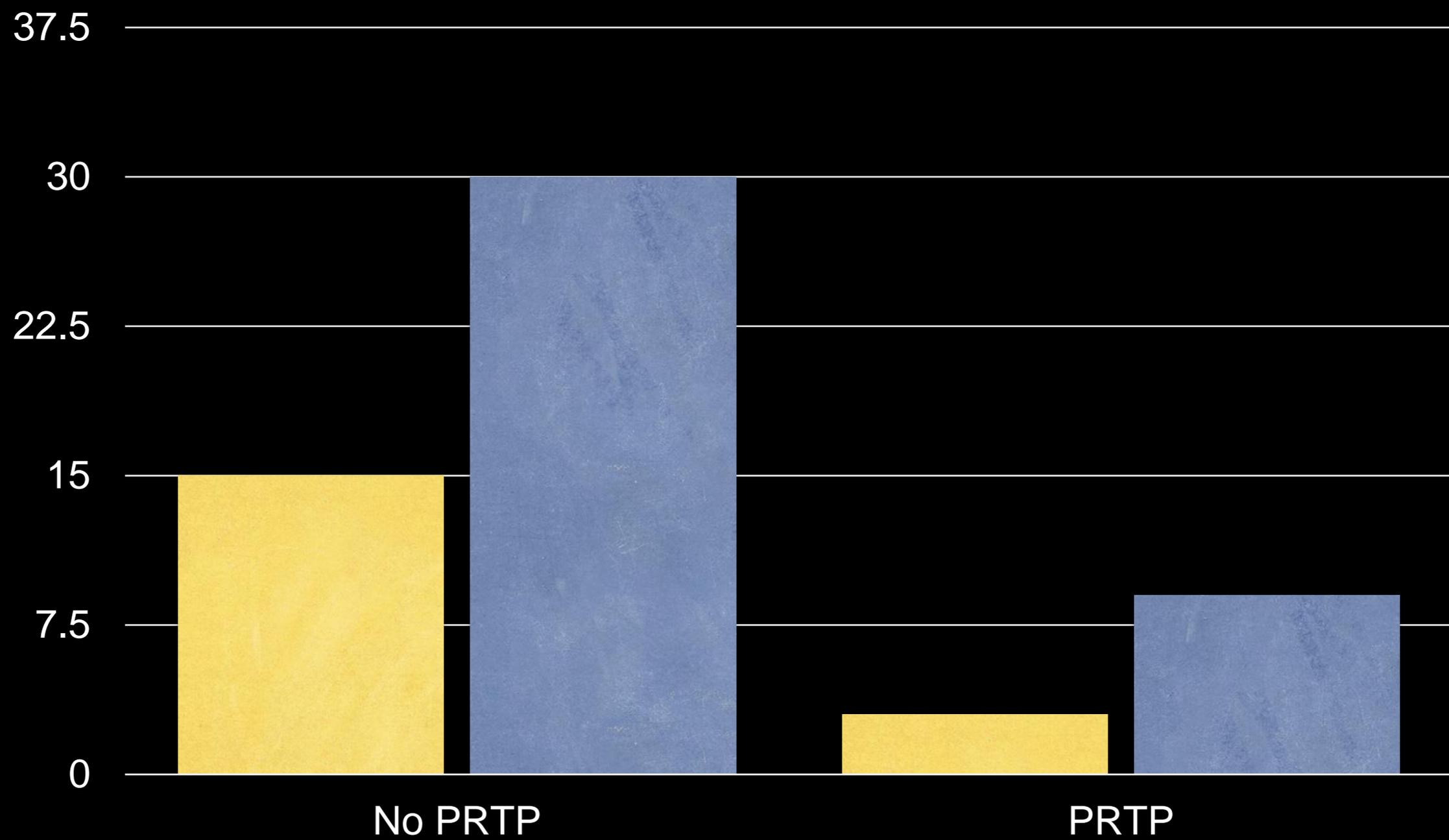
- 57 charts were reviewed that met inclusion criteria. A Standard concussion assessment tool was used in 18 of the cases and was not used in 39 of the cases

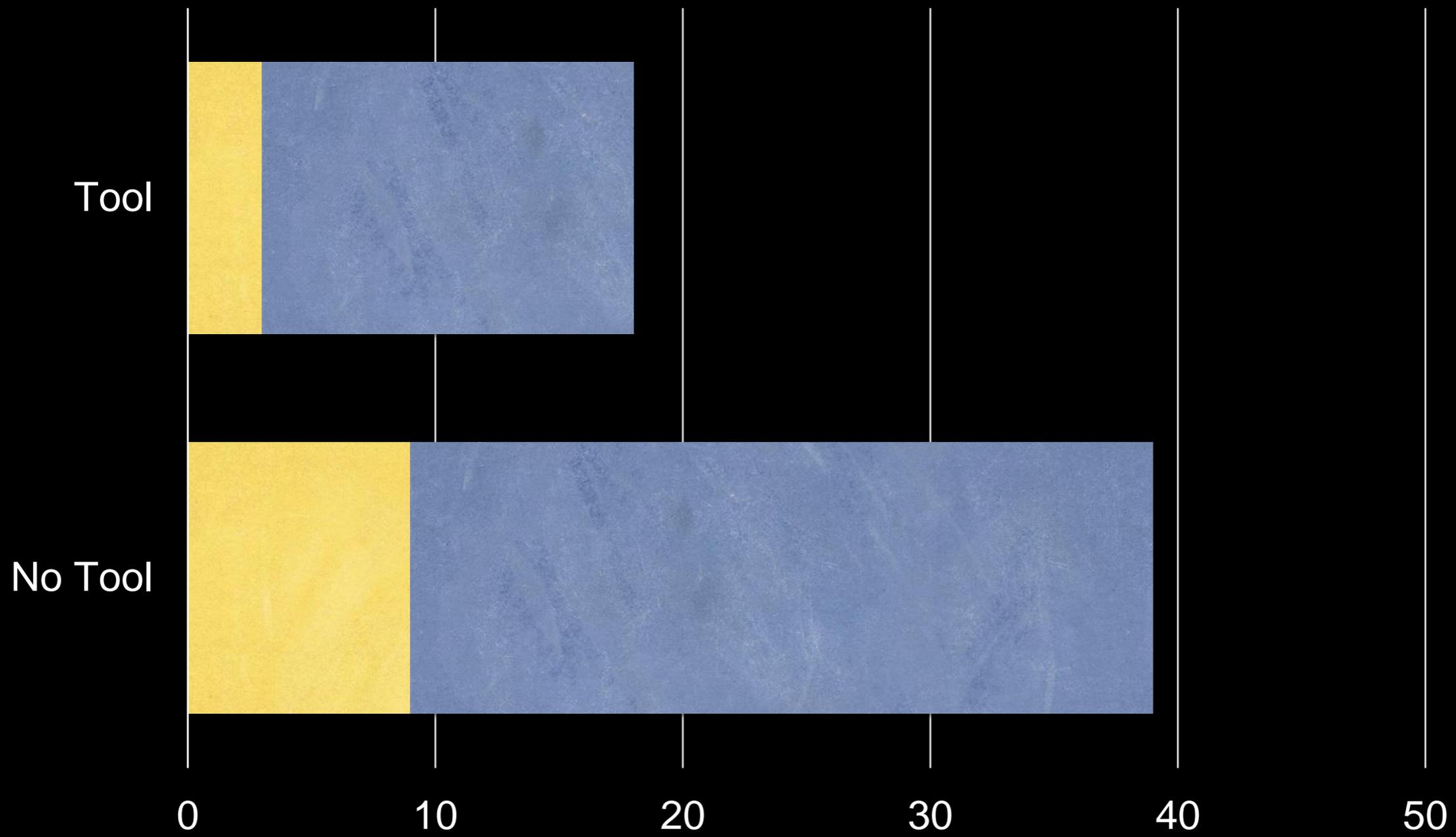
- Premature return to play occurred in 3 cases when an assessment tool was used and 9 cases when a tool was not used
- 16% premature return to play with use of tool and 23% without
- 21% overall

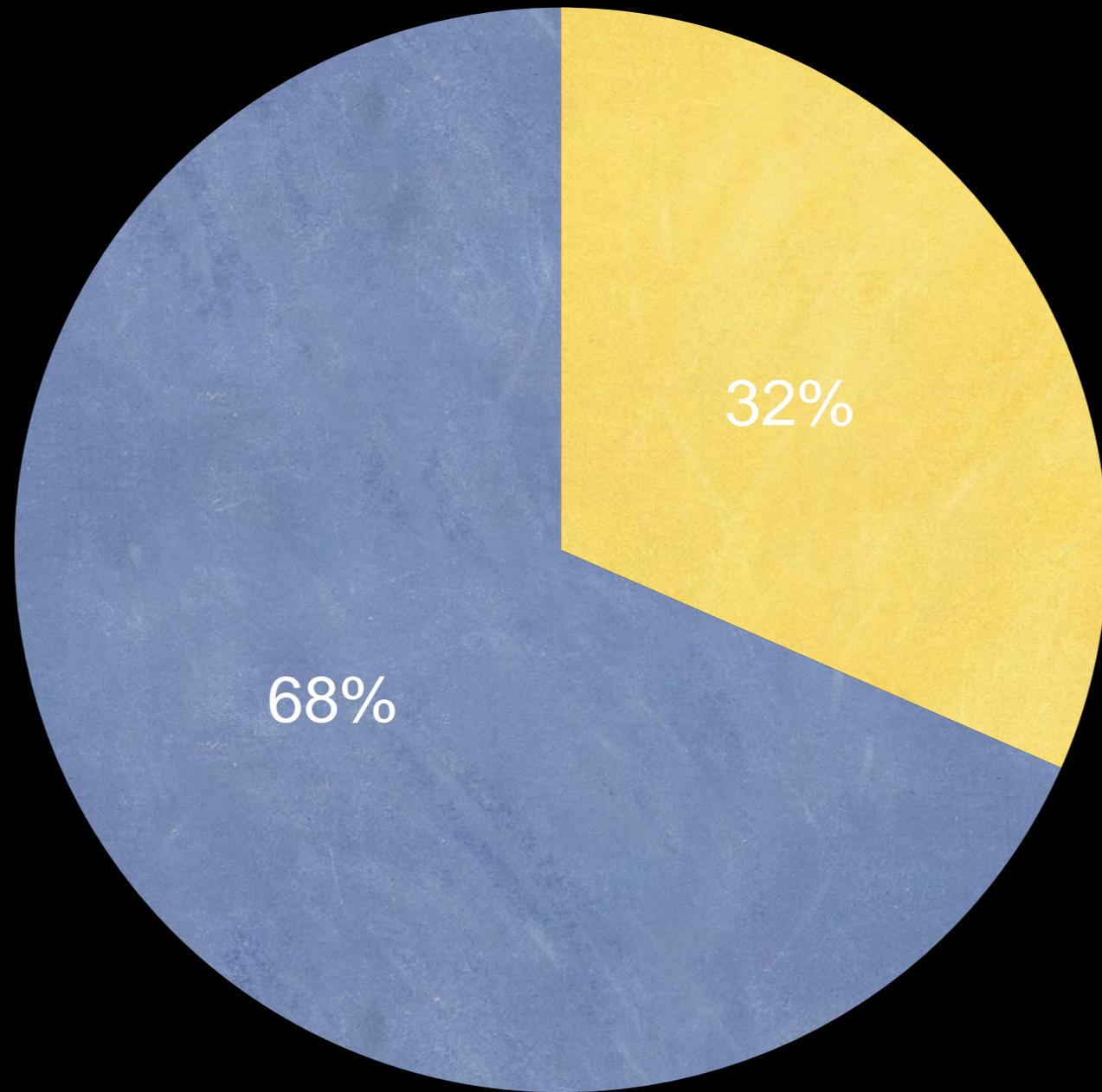
- A standard concussion assessment tool was used in 32% of cases of sports related concussion

- Chi-square analysis: 0.30
- P-value 0.58

	Premature return to play	No PRTP	total
Use of assessment tool	15	3	18
No tool	30	9	39
total	45	12	57







# Limitations

- retrospective chart review
- small sample size, coding
- only local data
- only sports related concussion

# Conclusion

- Fewer instances of premature return to play but not statistically significant with p value = 0.58
- Based on this review, the local data does not refute the consensus statement by CISG and AMSSM recommending the use of standard assessment tools.

# discussion

- Increase sample size. Lack of coding for sports related concussion made larger volume of data collection more difficult
- more patients, more metrics, follow up calls
- specific tools
- Computer Testing

- Can assessments be applied to concussions that do not occur during a sports activity? Data would be easier to analyze using ICD codes
- Return to learning was not specifically addressed, may be more relevant and important to the general population

- Quality improvement project
- Local data, much lower overall incidence of premature return to play, 21% vs 40-50%. Possible reasons: Study would only detect if documented in follow up visit or phone call, and if follow up occurred within Unity Point
- 32%, why is this low? How does this compare nationally
- Difficult chart review due to coding
- What does it mean to be sport-related

# References

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- Carson J, Lawrence D, Kraft S, Garel A, Snow C, et al. Premature return to play and return to learn after sport-related concussion. *Canadian Family Physician* June 2014, 60(6) e310-e315