

MULTI-DOMAIN EVALUATION OF ATHLETIC TRAINER RESOURCE AWARENESS AND UTILIZATION

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Capstone Project

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Overview

Background and Significance

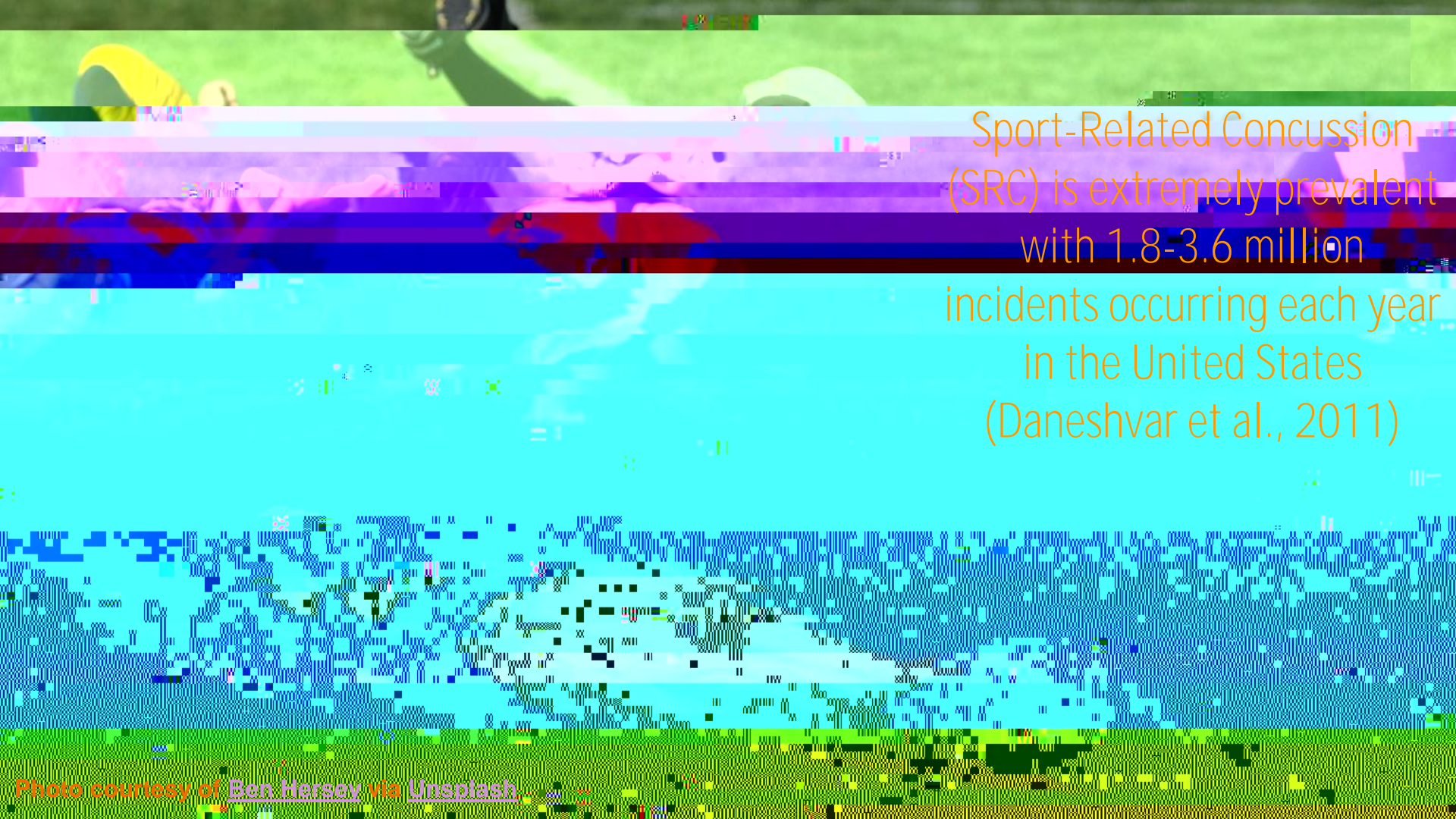
*Objective and Project
Timeline*

*Survey Design and
Procedures*

Results

Discussion and Limitations

*Conclusions and Future
Directions*



Sport-Related Concussion
(SRC) is extremely prevalent
with 1.8-3.6 million
incidents occurring each year
in the United States
(Daneshvar et al., 2011)



Higher rates in contact sports such as football, ice hockey, and rugby but also soccer, volleyball and gymnastics (Clay et al., 2013)

2011



Athletic trainers are uniquely suited to address the challenges associated with SRC and manage athletes after injury

Photo courtesy of [Dylan Nolte](#) via [Unsplash](#)

Current Best Practices

Current guidelines from the American Academy of Neurology (AAN), the National Athletic Trainers' Association (NATA), the National Collegiate Athletic Association (NCAA), and the International Concussion in Sport Group (CISG) aim to provide a comprehensive approach to concussion management (Giza et al., 2013; Broglio et al., 2014; Parsons et al., 2014; McCrory et al., 2017)

Key Points:

Immediate removal from play after suspected injury

Established concussion reporting process and concussion management plan

Period of acute rest and a stepwise return-to-play (RTP)

Multifaceted approach to both baseline and post-injury assessment

Utilization of educational resources and materials

Education Utilization and Impact

Education is shown to improve both concussion knowledge and attitudes (Caron et al., 2014)

Project Purpose

Purpose: *Evaluate the awareness and utilization of current resources and practice patterns related to the concussion management and education through a professional survey of Wisconsin Athletic Trainers' Association (WATA) members*

680+

Timeline Overview



Survey Design

*Demographics and
Professional Experience*

15 Questions

Clinical Practice

25 Questions

Education Utilization

15 Questions

*55-question survey developed
throughout summer/fall of 2017*

Demographics and Professional Experience

15-items

Evaluate age, gender, years of experience, practice setting, employment model, and sport responsibilities

Additional school-specific questions on enrollment and competition level if applicable

Initial screening questions were used to determine WATA membership and athletic training practice within the State of Wisconsin

Clinical Practice Patterns

25 Questions

Focused on clinical patterns of practice and management of athletes:

What tools are used?

When are they used?

What tools are avoided and why?

Specific RTP practices such as use of graded exertion programs and coordination with other healthcare providers

Endorsement of specific SRC guidelines

Educational Practice Patterns

15 Questions

Focused on educational practice patterns among athletes, ATs, and parents

Who receives education (audience)?

How is it presented (format)?

What is presented (content)?

What is perceived as most valuable?

Additionally, ATs were asked about why they were successful or unsuccessful at providing education to athletes and parents

Survey Results

*7.6% (52/680) estimated
WATA membership response
rate
N = 50 valid survey responses
included in analysis*

Sample Description

56% of respondents were female

Typically between ages of 35 to 44 years old

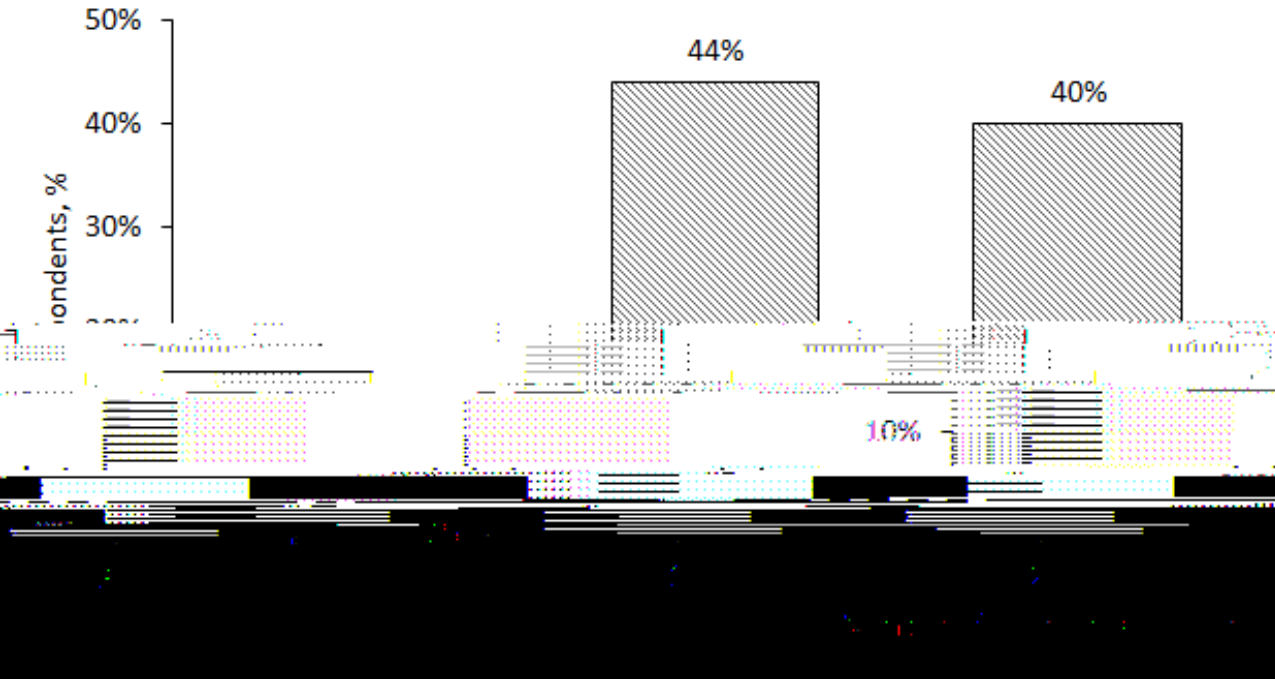
11 to 15 years of professional experience

54% had a Master's degree or higher

Distributed between rural (42%), urban (32%), and suburban (24%) practice settings

Wide range of sport responsibilities (Median = 11), most commonly including football, basketball, soccer, track and field, and volleyball

Guideline Utilization



Most ATs (84%) use 2 or more guidelines

All indicated using at least one guideline

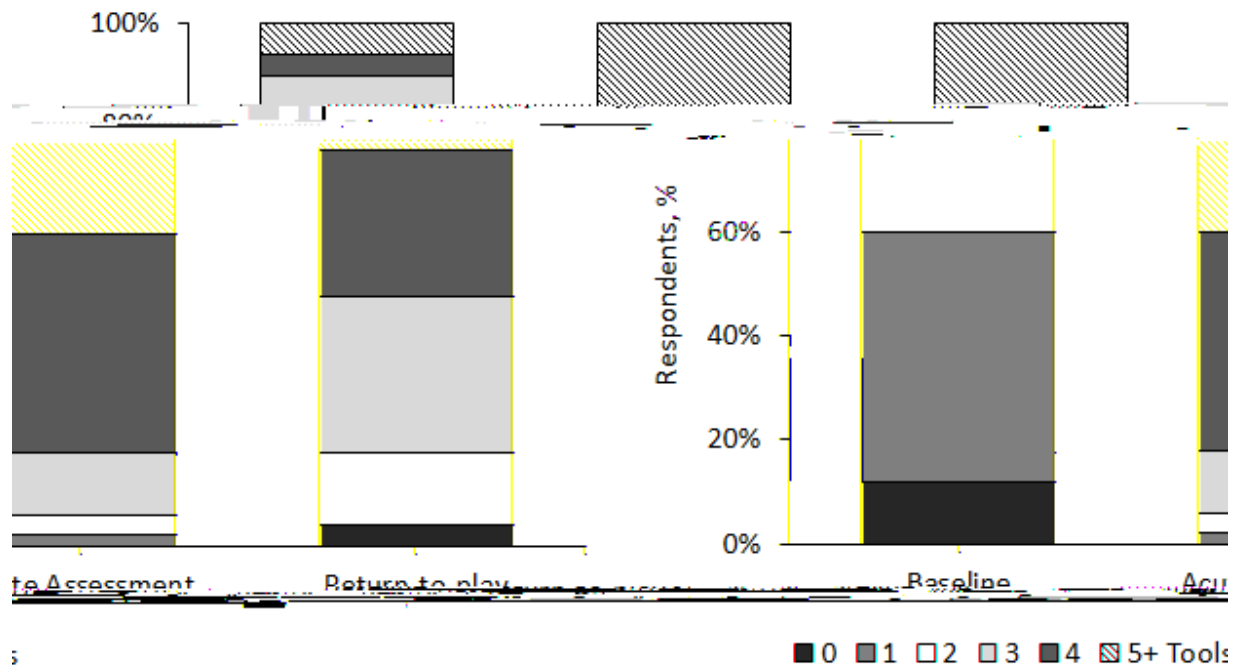
Most commonly endorsed:

NATA Position Statement (96%)

Concussion in Sport Group guidelines (78%)

Most ATs endorse recently published guidelines

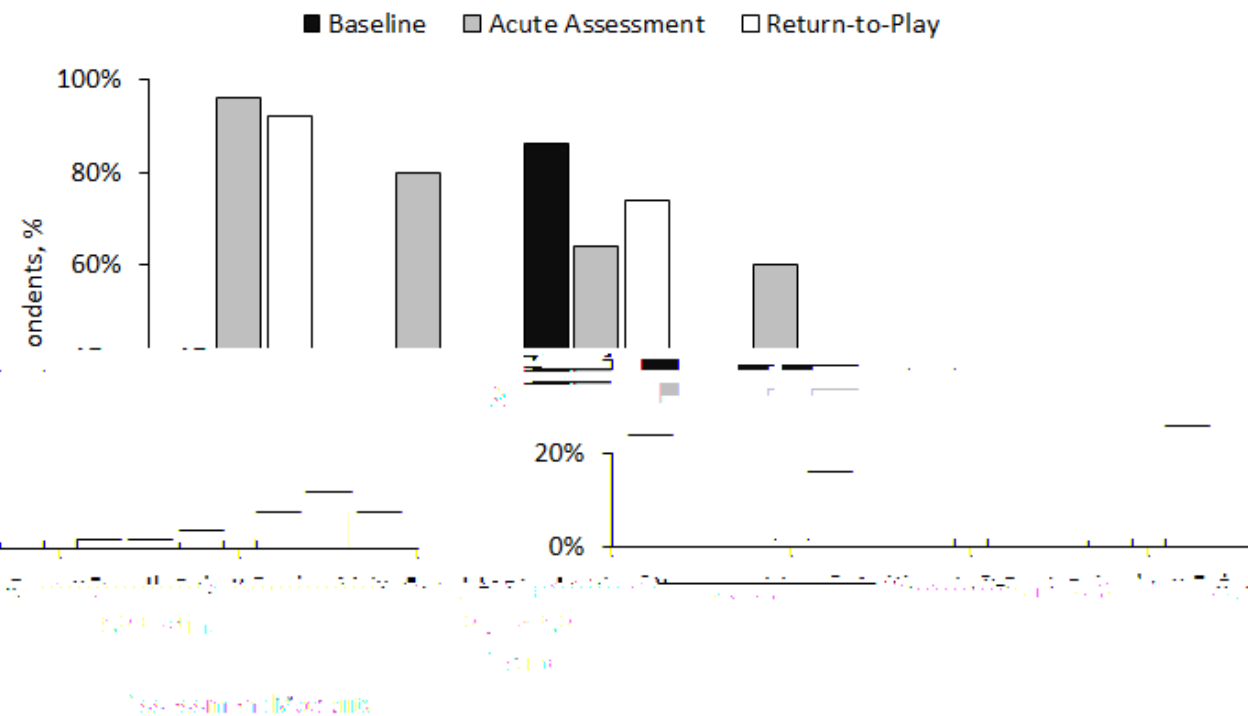
Assessment Timing and Utilization



Limited multifaceted assessment at baseline (20%).

But, extensive multifaceted assessment acutely (94%).

Assessment Timing and Utilization



Extensive use of computerized neuropsychological testing (CNT) at baseline (86%)

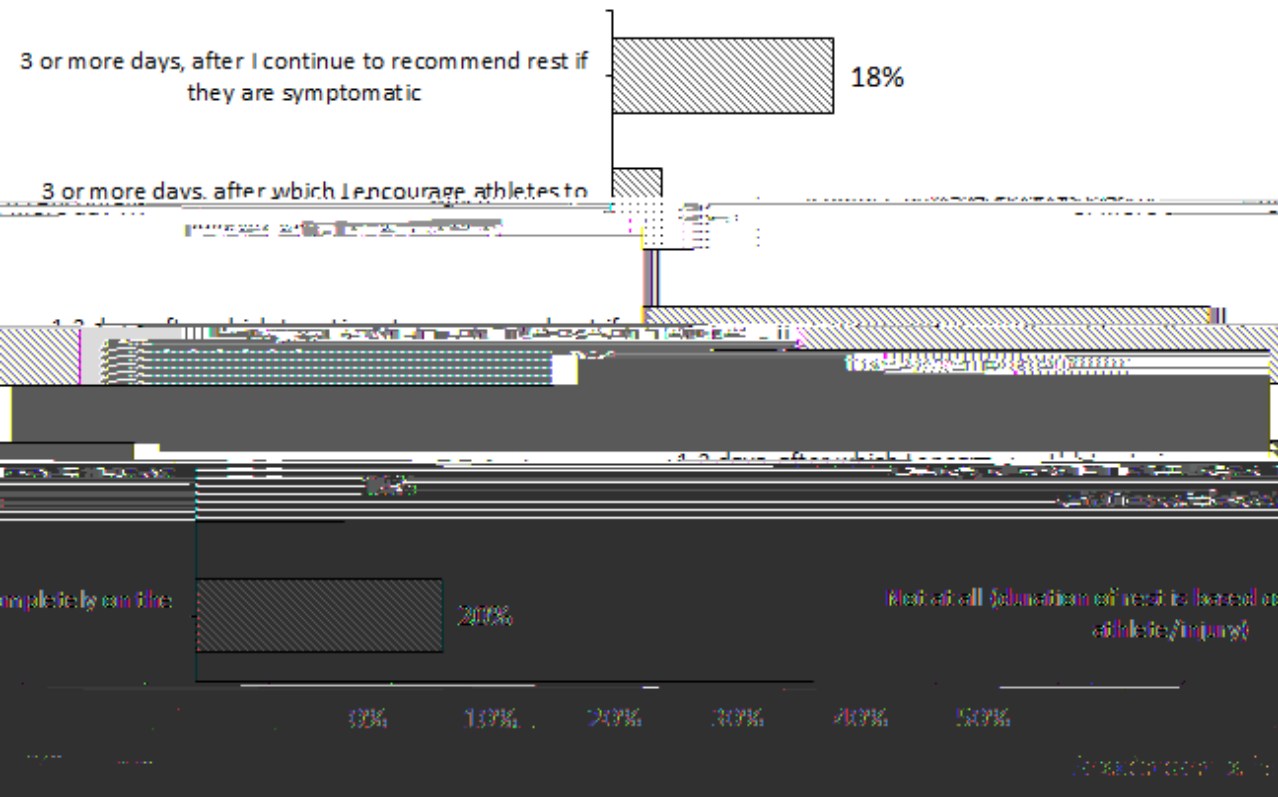
Limited use of pencil and paper NT (2-4%) and Ocular-Motor testing (6-8%)

Symptom checklist is most utilized tool both acutely (96%) and at RTP (92%)

Concussion grading scales were sometimes used (14-16%)

Resource Avoidance

Return-to-Play and Injury Management



Most ATs reported waiting to resume activity until after the athlete was symptom-free

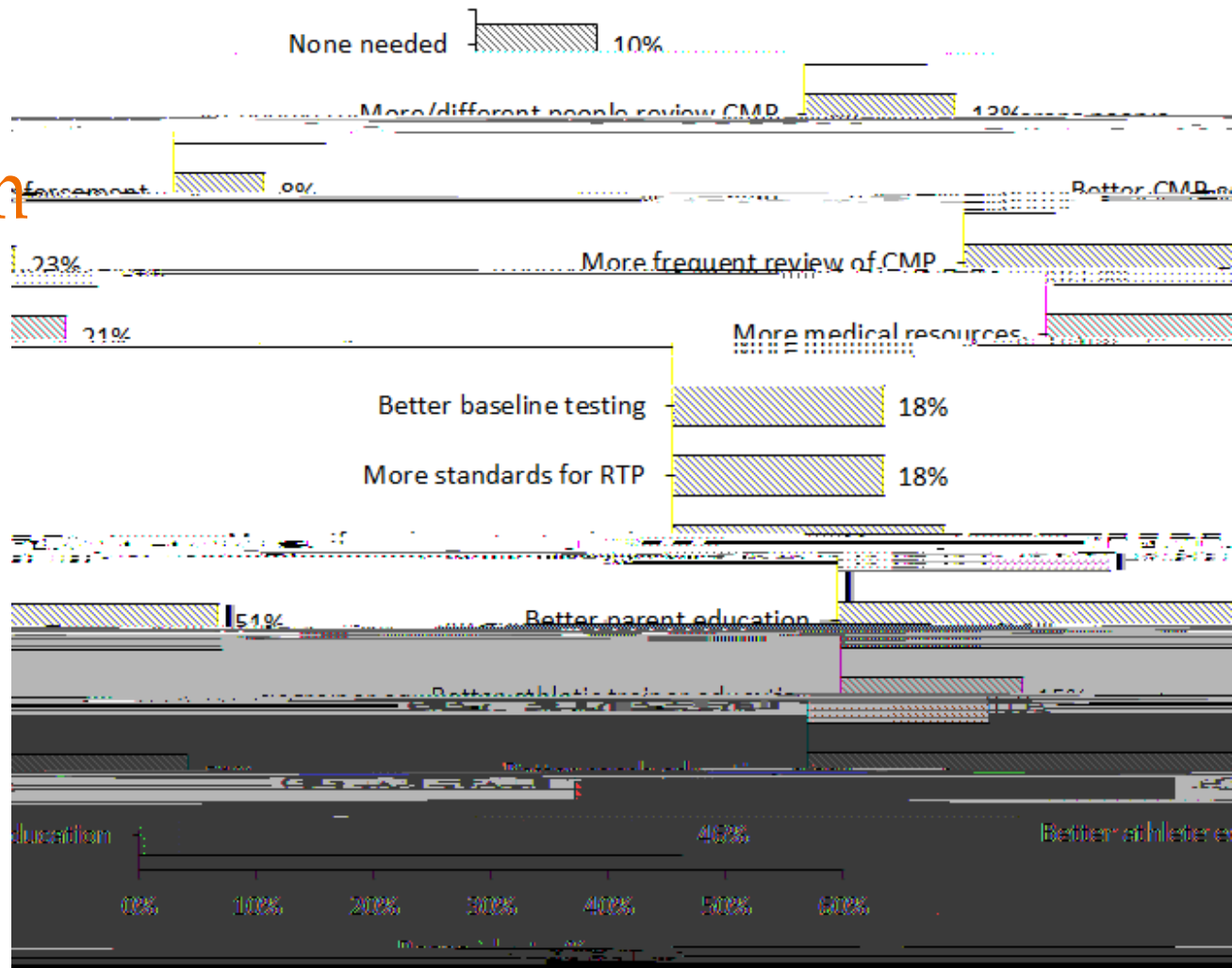
92% reported using a graded exertion program

Majority (60%) felt that current guidelines/approaches are effective but require more refinement and study

Concussion Management Plan

Suggested improvements primarily emphasize parent (51%), coach (51%), and athlete (46%) education

Only 10% indicate that no improvements are needed.

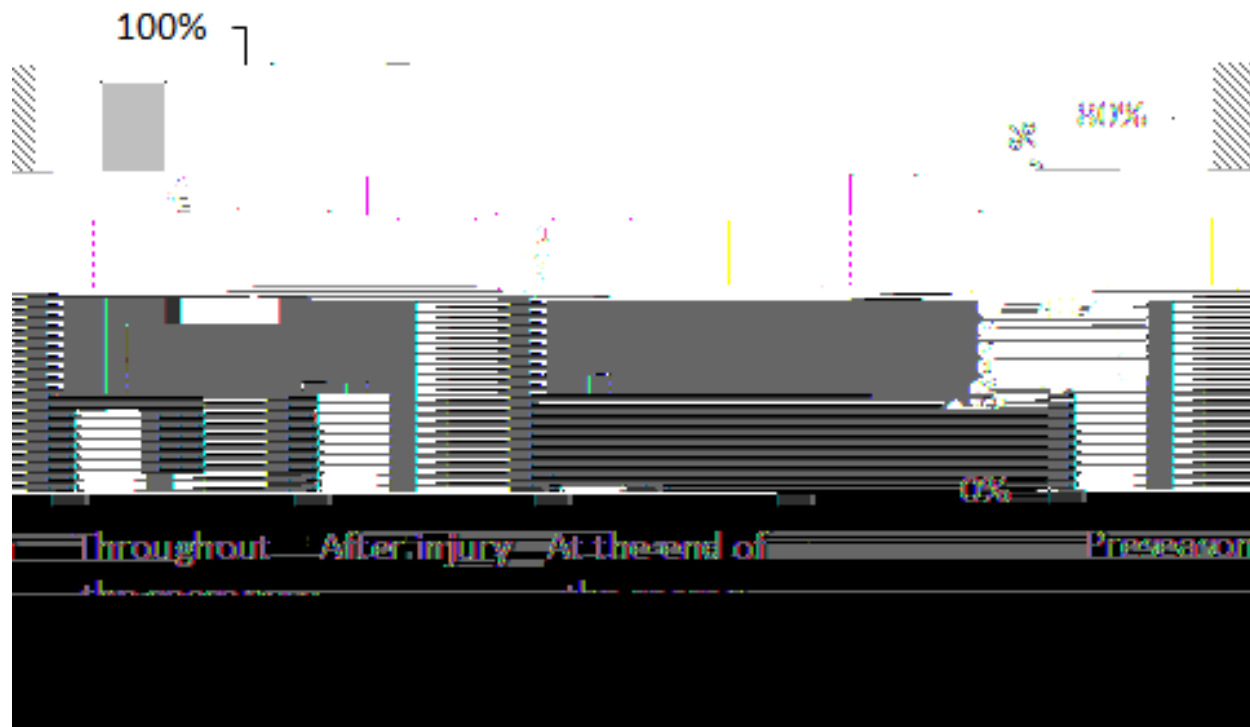


Educational Practice Patterns

Typically provided during the preseason and after injury

26% of parents were not provided preseason concussion education and only 60% after injury

70% indicated that all or nearly all athletes were provided the state-mandated concussion information sheet

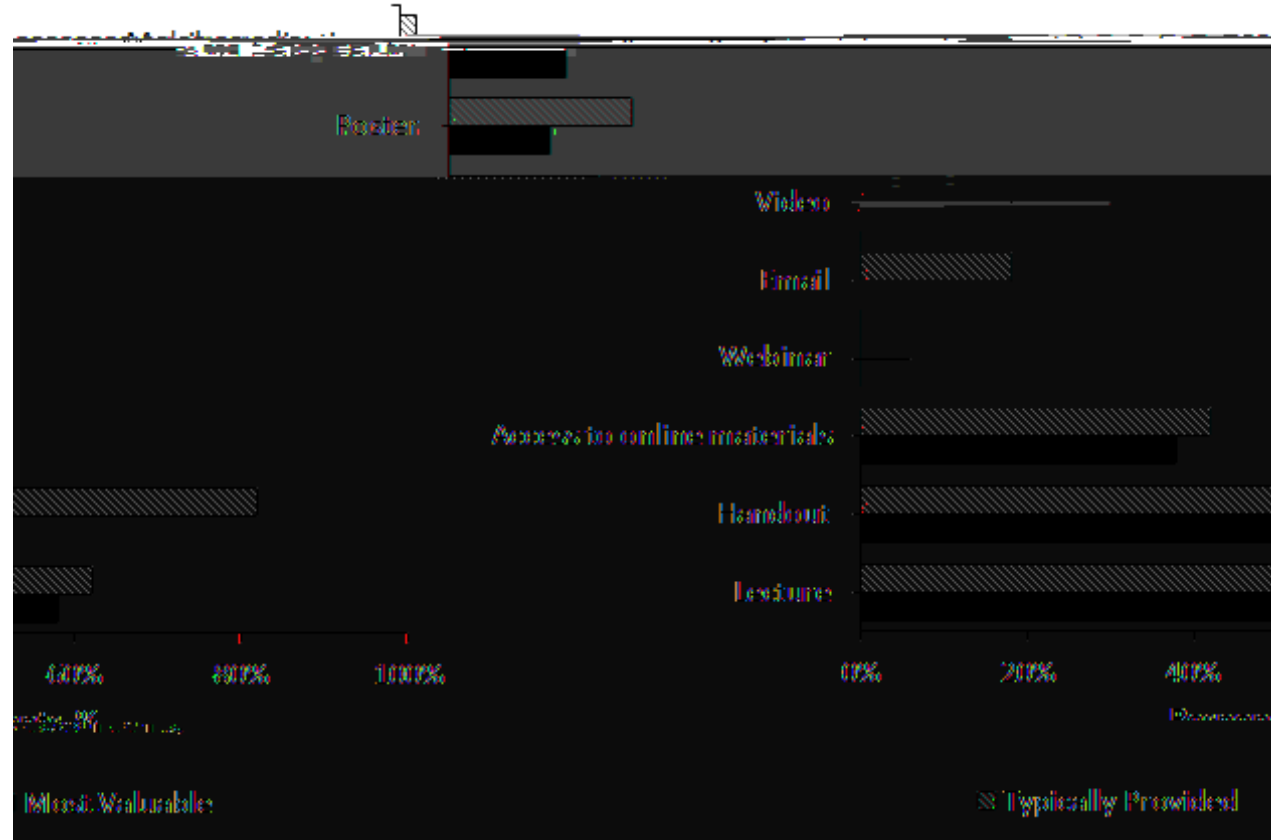


Educational Practice Patterns

Most commonly used handouts (82%) and lectures (62%)

Mobile applications and videos were rated more valuable than they were used

Handouts and posters were used much more often than they were thought to be valuable



Educational Practice Patterns

The amount of education provided to athletes (43%), parents (57%), and coaches (43%) was commonly reported as less than ideal

ATs rarely reported that athlete (10%), parent (2%), and coach (6%) was more than ideal

100%



Discussion

Discussion

Clinical practice patterns largely comply with recently published concussion guidelines including baseline testing, graduated return to activity, and multifaceted assessment acutely after injury and at RTP

Areas of Improvement:

Ⓛ

Limitations

Response rate was limited at only 7.6% of the target audience

Less than previous state and national investigations of AT concussion management practices (9.0-40.2%) (Baugh et al., 2014; Buckley et al., 2015)

Most ATs indicated assessing athletes using a clinical examination acutely and at RTP

Clinical examination is not clearly defined and may refer to many different techniques or evaluations

Lower rates of multifaceted baseline assessment may be overestimated

Many CNTs incorporate multifaceted components into one assessment including a health history, symptom checklist, and neuropsychological testing

Conclusions

Conclusions

Although limited number of ATs continue to use outdated resources and guidelines, Wisconsin ATs largely follow current concussion management best practices including clinical management and education

Less than ideal practice patterns are likely influenced by a lack of resources (i.e., time, personnel, or funding)

Improvements in educational resource design, implementation, and frequency of use may alleviate gaps

Future Directions

Implement knowledge translation strategies, such as the Knowledge to Action framework, can help bridge this gap by integrating researchers into the resource creation, evaluation, and refinement process (Graham, 2006)

Future efforts should focus on further describing specific subsamples of ATs based on practice setting, competition level, and other demographic characteristics

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