Utilization of Sports Injury Prevention Programs by Athletic Trainers in the State of New Jersey

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IRB Approval

• UMDNJ IRB Approved 1/25/2009

• Protocol 0120090013 “Utilization of Sports Injury Prevention Programs by Certified Athletic Trainers in the State of New Jersey.”
Sports injury prevention: growing field of sports medicine.

A quick search of the literature reveals numerous studies that support balance-training programs to decrease the incidence of ankle injuries (1).

Proprioceptive and neuromuscular training protocols that decrease the incidence of anterior cruciate ligament injuries in female athletes (2,3).

Unfortunately, it is unknown whether these injury prevention programs are being implemented at high school or college athletic programs.
Primary Objective

To determine if sports injury prevention programs are utilized appropriately or underutilized in high school and college athletic programs in the state of New Jersey.
Secondary Objectives

• To identify the types of injury prevention programs being implemented.
• To identify potential barriers to implementing these programs.
• To identify any differences between high school and college athletic programs.
• To determine if other demographic factors influence the utilization of injury prevention programs.
Study Design

We distributed an email-based survey to athletic trainers in the state of New Jersey, with the help of the Athletic Trainers Society of New Jersey (ATSNJ) and the ATSNJ president Michael Prybicien.
1. Default Section

1. Please select you gender:
   - Male
   - Female

2. Please indicate your current age:

3. Are you licensed as an athletic trainer in the state of New Jersey?
   - Yes
   - No

4. If you answered “Yes” to question #3, how many years have you been certified as an athletic trainer?

5. What setting best describes where you practice?
   - High School
   - College
   - Other

   Other (please specify)

6. How many years have you been at your current job?

7. Do you institute any injury prevention programs at your current practice setting?
   - Yes
   - No
Utilization of Sports Injury Prevention Programs by ATC's in the State of NJ

8. If you answered "Yes" to question #7, which of the following injury prevention programs have you instituted?

☐ ACL injury prevention program
☐ Ankle injury prevention program
☐ Back injury prevention program
☐ Hamstring injury prevention program
☐ Knee injury prevention program
☐ Neck injury prevention program
☐ Rotator cuff injury prevention program
☐ Shoulder injury prevention program
☐ Other

Other (please specify):

9. If you answered "No" to question #7, do you believe that injury prevention programs would be helpful to the athletes that you provide care for?

☐ Yes
☐ No
☐ Not sure

10. If you answered "Yes" to question #9 please check off the major reason or reasons why you have not instituted injury prevention programs at your current practice setting.

☐ Limited space
☐ Limited time
☐ Limited staff
☐ Financial restraints
☐ Opposition from coaches
☐ Unaware of evidence-based injury prevention programs
☐ Other

Other (please specify):
Results #1

• Our response rate was 16.8% (164/975 potential respondents).
• 50.3% of the respondents indicated that they utilized injury prevention programs.
• The most commonly utilized programs were rotator cuff injury, ankle injury and ACL injury prevention programs (57.3, 53.7 and 53.7% respectively).
### Results #2

#### DEMOGRAPHICS

<table>
<thead>
<tr>
<th></th>
<th>Survey respondents</th>
<th>Current ATSNJ Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Male</td>
<td>55.8</td>
<td>49.5</td>
</tr>
<tr>
<td>% Female</td>
<td>44.2</td>
<td>50.5</td>
</tr>
<tr>
<td>Mean Age</td>
<td>37</td>
<td>35</td>
</tr>
<tr>
<td>Mean # years in practice</td>
<td>13</td>
<td>19</td>
</tr>
<tr>
<td>% licensed/certified (ATC)</td>
<td>97.6</td>
<td>69.4</td>
</tr>
<tr>
<td>% practicing at H.S.</td>
<td>70.1</td>
<td>37.4</td>
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<tr>
<td>% practicing at college</td>
<td>18.3</td>
<td>13.5</td>
</tr>
<tr>
<td>% practicing in other setting</td>
<td>11.6</td>
<td>49.1</td>
</tr>
</tbody>
</table>
Results #3

• 50.6% of the respondents indicated that they utilized injury prevention programs.
• The most commonly utilized programs were rotator cuff injury, ankle injury and ACL injury prevention programs (57.3, 53.7 and 53.7% respectively).
If you answered "Yes" to question #7, which of the following injury prevention programs have you instituted?

- ACL injury prevention program
- Ankle injury prevention program
- Back injury prevention program
- Hamstring injury prevention program
- Knee injury prevention program
- Neck injury prevention program
- Rotator cuff injury prevention program
- Shoulder injury prevention program
- Other
Results #4

- 49.4% of the respondents indicated that they didn’t utilize injury prevention programs.
- The majority of this group (87.7%) believed these programs would be helpful to their athletes.
- The primary barrier identified to implementing these programs was lack of time (44.7%).
- The secondary barrier was limited staff (17.1%).
Results #5

- College athletic trainers are more likely to utilize injury prevention programs (chi square value 10.3, p value 0.0066)
- Especially for rotator cuff (chi square value 5.9, p value 0.05) and shoulder injury prevention programs (chi square value 11.9, p value 0.0026)
Results #6

- Female athletic trainers were less likely to utilize back (chi square value 5.4, p value 0.02), hamstring (chi square value 7.1, p value 0.0077), shoulder injury prevention programs (chi square value 5.6, p value 0.018) than their male counterparts.
Results #7

Athletic trainers with more clinical experience (# years licensed) were more likely to utilize injury prevention programs (via logistic regression model; likelihood ratio 5.46, Pr > ChiSq 0.0194)

Especially when looking at the use of the following programs: ACL (LR 4.85, Pr > ChiSq 0.0276), back (LR 3.80, Pr > ChiSq 0.05), rotator cuff (LR 3.93, Pr > ChiSq 0.047),
If you answered "Yes" to question #9 please check off the major reason or reasons why you have not instituted injury prevention programs at your current practice setting.
Summary

• Approximately 50% of respondents utilize sports injury prevention programs
• The most commonly utilized programs were rotator cuff injury, ankle injury and ACL injury prevention programs
• For those who didn’t utilize these programs, the primary barrier identified was lack of time.
• Athletic trainers who practice in a college setting and those who have more clinical experience are more likely to utilize injury prevention programs.
• There are some gender specific findings, but the relevance of these findings are unclear.
Conclusion

• Injury prevention programs are being under utilized by athletic trainers in high school more so than college athletic departments in the state of New Jersey. Addressing some of the barriers to implementing these programs may improve the utilization of these programs.
Thank you

• Michael Prybicien and ATSNJ members
• Dr. Gerard Malanga
• Dr. Susan Garstang
• Jeffrey Zhang
References

