

Apr 11th, 11:00 AM - 2:00 PM

Common Spine Boarding Practices in the Athletic Setting: A Survey of Athletic Trainers and Athletic Training Students

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Field, Jamie Lynne and Weller, Michael S., "Common Spine Boarding Practices in the Athletic Setting: A Survey of Athletic Trainers and Athletic Training Students" (2018). *The Research and Scholarship Symposium*. 5.
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Common Spine Boarding Practices in the

Athletic Setting:

A Survey of Athletic Trainers and Athletic Training Students

Jamie Field, ATs; Michael Weller, MS, ATC

INTRODUCTION

- The prehospital care of spinal injuries is a debated topic amongst those in the area of emergency medicine.
- This risk is increased after medical professionals have come to the aid of the victim, increasing risk for further injury from 1.8%-10% in a hospital and up to 25% at the injury scene.¹
- There are approximately 11,000 cases of spinal cord injury in the United States annually, 7.4% of those cases being sports related.¹
- Past research has shown the need for improved care and education of spinal injuries. There are

METHODS

1. Write survey.
2. Obtain OATA email addresses.
3. Email survey link to all (2,000+) OATA members.
4. Survey was open for 20 days.
5. After survey is closed, review results.
Compare between AT and ATS, actual and best practice, and reality and literature.

DISCUSSION

- Immobilization Devices in Literature:
 - Rigid spine boards have been proven to, "induce pain, patient agitation, and respiratory compromise."²
 - Other immobilization devices, such as a vacuum mattress, are now being used in place of a rigid spine board.³
- Transport Methods in Literature:
 - The log roll technique has been found to create a great amount of movement in the cervical spine.⁴
 - The 8+ person lift has been found to reduce cervical spinal motion compared to the log roll.¹

RESULTS

AT:	Immobilization Devices: Rigid Spine Board: 80.49% Scoop Stretcher: 6.10% Vacuum Mattress: 4.88% Other: 8.54%	AT:	Transport Methods: Log Roll: 33.53% 6+ Person Lift: 22.46% 8+ Person Lift: 9.88% EMS Spine Boards: 29.64% Other: 4.49%
AT Preference:	Rigid Spine Board: 71.19% Scoop Stretcher: 12.43% Vacuum Mattress: 16.38%	AT Preference:	Log Roll: 35.00% 6+ Person Lift: 36.67% 8+ Person Lift: 25.56% Other: 2.78%
ATS:	Rigid Spine Board: 82.46% Scoop Stretcher: 5.26% Vacuum Mattress: 2.63% Unknown: 8.77% Other: 0.88%	ATS:	Log Roll: 33.80% 6+ Person Lift: 24.88% 8+ Person Lift: 15.49% EMS Spine Boards: 21.13% Unknown: 4.23% Other: 0.47%
ATS Preference:	Rigid Spine Board: 61.67% Scoop Stretcher: 14.17% Vacuum Mattress: 10.00% Unknown: 12.50% Other: 1.67%	ATS Preference:	Log Roll: 16.95% 6+ Person Lift: 38.98% 8+ Person Lift: 39.83% Unknown: 1.69% Other: 2.54%

KEY:
**Best Practice According to Literature
Predominantly Practiced**

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2. White IV C, Domeier R, Millin M. EMS Spinal Precautions and the Use of the Long Backboard -Resource Document to the Position Statement of the National Association of EMS Physicians and the American College of Surgeons Committee on Trauma. *Prehosp Emerg Care* [serial online]. April 2014;18(2):306-314 9p. Available from: CINAHL Plus with Full Text, Ipswich, MA. Accessed March 17, 2016.
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4. Conrad B, Del Rossi G, Horodyski M, Prasarn M, Alemi Y, Rehtunge G. Eliminating log rolling as a spine trauma order. *Surg Neurol Int* [serial online]. April 2012;3(4):S188-S197. Available from: Academic Search Complete, Ipswich, MA. Accessed March 17, 2016.

DEMOGRAPHICS

- 201 AT, 131 ATS.
- Representing: high schools, NCAA DI, DII, and DIII, NAIA, professional sports, health and fitness, and clinic.
- 60.60% of ATs had Master's degrees.
- 85.94% of ATs have participated in spine boarding someone before.
- 64.16% of ATS have participated in spine boarding someone before.

LIMITATIONS

- Delay in sending out survey link, limited time to analyze data.
- Questions were misunderstood, some could have been worded better.
- Seemed to be a glitch in Qualtrics- not everyone saw all of the questions.

CONCLUSION

- Spine boarding is a team effort between ATs and EMS.
- Spine boarding protocols need to be universal and realistic.
- Discussions need to be had about spine boarding protocols, more work needs to be done.

COMMENT FROM A PARTICIPANT

"I strongly believe NATA needs to streamline spine boarding with EMS so that all emergency responders (AT's and EMS) are trained and skilled in the same emergency response patterns and all practicing the same. I also believe it should be mandatory or expected to review and practice emergency procedures WITH all of your respective site's responders annually to **encourage communication, safe "team" approach, and muscle memory.**" –AT