

# Taking Aim at Removing Backboards Altogether

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# Which one of these patients needs immobilization?



- ▶ The one on the phone with his attorney



Would anyone  
argue that this  
patient needs  
immobilization?

The paramedic  
who cared for  
him did not  
think so!!



# ACS Bulletin May-June 1967

## BULLETIN

American College of Surgeons  
May • June 1967 volume 52 number 3

### Death in a Ditch

FARRINGTON, M.D., F.A.C.S., Minocqua, Wisconsin

During the population of Minocqua each year increases from 10,000 to 30,000 as this town on Highway 51 transforms into a resort area. As the population soars does the number of automobiles, trucks, buses, motorcycles and motorbikes which tear over the highways and across the vast wooded playground which is northern Wisconsin.

"Death in a ditch," observes J. D. Farrington, orthopedic surgeon at Lakeland Memorial Hospital, Woodruff, Wisconsin, "occurs with immediate probability 24 hours a day, the year around, in any weather. Snow and wind make transportation hazardous. In Minocqua and environs used a privately-owned ambulance. Otherwise, the town had no means with which it could rescue the injured. Worse than this, individuals who attended the injured were only casually trained."

Dr. Farrington, who has been in practice in Minocqua since 1966, set about rectifying this hair-whitening problem by enlisting the help of his fellow townsmen and organizing them in rescue techniques. Dr. Farrington is assisted by Sam W. Banks, of the Chicago Fire Department, who has been on the Chicago Fire Department's Trauma Team, in association with the Chicago Fire Department, for five years ago established a course, probably the first of its kind, to train those first to see the injured how to give them initial care.

Dr. Farrington is doing in Minocqua should be done in any community in the United States," Dr. Banks says. "It is the responsibility of the medical profession to give such courses on a local and regional basis."

Photographs which illustrate Dr. Farrington's article were taken for the Minocqua Rescue Squad by Audrey Perkins.



Dr. Farrington

THE ROAD WOUND AWAY into the beautiful moonlit night as John Burrows started for home. His wife, Ruth, dozed beside him as he drove along the narrow road from the country home where they had dined with friends. There was little traffic on the road and John, remembering the evening's events, was enjoying the drive.

Suddenly a car came speeding around a corner and careened crazily toward the Burrows' vehicle. Aroused from his dreaming, John quickly pressed on the accelerator and turned his car sharply to avoid the oncoming vehicle.

His car hit the soft shoulder of the road, careened into a deep ditch and slammed into a telephone pole.

John was thrown against the steering wheel and corner post of the car and blacked out. How long he was out John did not know, but when he awakened, he felt a severe pain in his neck and an unusual tingling in his arms and legs.

His neck hurt when he tried to turn, but nevertheless he did turn to see what had happened to Ruth. She was crumpled against the door, half in and half out of the seat, looking at him and crying. By the light from the moon he could see blood running down her leg, and he shuddered as he saw bone protruding from the wound.

He tried to move over to his wife but a sharp pain in his neck stopped him. As John thought about what he possibly could do, a man appeared at the car window and shouted: "I'm going for help!"

John blacked out again and later awakened to voices.

"Come on, fellow. We'll take you and your wife to the hospital."

He was pulled from the car, placed on a stretcher, and carried to the ambulance. Ruth soon was beside him on a similar rig. The door was slammed closed and the driver and his helper got into the front seat. The ambulance leaped forward with a screech from the tires and a shriek from the siren.

If this seems dramatic, it is meant to be. Unfortunately this story is too often true, for, if John survives, with the impending permanent cord damage, he will be paralyzed the rest of his life.

To protect the victim of an accident from further injury as he is removed from the

Spine boards (Fig. 2) are of great value in extricating all types of injured, particularly the most frequently mishandled injury, fracture of the spine with actual or impending damage to the cord.

The spine board is ideal for the victim with such an injury, but, once again, preparation of this patient so that he can be removed is a step-by-step procedure.





# 984 DOT EMT National Standard Curriculum

- ▶ Patients with **suspected** spinal injuries will **require** cervical collars and immobilization on a spine board or special stretcher.



ORIGINAL ARTICLE

## Spine Immobilization in Penetrating Trauma: More Harm Than Good?

*Elliott R. Haut, MD, Brian T. Kalish, BA, EMT-B, David T. Efron, MD, Adil H. Haider, MD, MPH,  
Kent A. Stevens, MD, MPH, Alicia N. Kieninger, MD, Edward E. Cornwell, III, MD,  
and David C. Chang, MBA, MPH, PhD*

uma 2010 Jan;68(1):115-20



	OR of Death	95% CI
Prehospital procedures		
Spine immobilization	2.06	1.35–3.13
Intubation	1.31	0.97–1.77
IV fluids	1.95	1.55–2.47
MAST	0.64	0.52–0.80
Chest decompression	0.63	0.52–0.77
Splint	3.83	0.30–48.96



# atient Outcome Prospective

- ▶ Number needed to treat 1,032
- ▶ Number needed to harm 66
- ▶ In other words, you would harm 16 patients before you benefited 1 patient



## REVIEW ARTICLE

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# Prehospital Spine Immobilization for Penetrating Trauma—Review and Recommendations From the Prehospital Trauma Life Support Executive Committee

*Lance E. Stuke, MD, MPH, Peter T. Pons, MD, Jeffrey S. Guy, MD, MSc, MMHC,  
Will P. Chapleau, RN, EMT-P, Frank K. Butler, MD, Capt MC USN (Ret), and Norman E. McSwain, MD*

J Trauma. 2011 Sep;71(3):763-9

No studies exist to support the use of spinal immobilization in patients with penetrating trauma, yet the practice is widespread among EMS agencies. A Cochrane review in 2001 of 4,453 potentially relevant articles found no randomized controlled trials to support the use of spinal immobilization in blunt or penetrating trauma.<sup>11</sup> Only one case report has been published in the literature documenting an unstable cervical spine injury from penetrating trauma in a patient without spinal cord injury.<sup>27</sup>



# prehospital Emergency Care July-September 2013

## POSITION STATEMENT

### **EMS SPINAL PRECAUTIONS AND THE USE OF THE LONG BACKBOARD**

National Association of EMS Physicians and American College  
of Surgeons Committee on Trauma



# EC July- September 2013

- ▶ However, the benefit of long backboards is largely unproven
- ▶ The backboard can induce pain, patient agitation, and respiratory compromise
- ▶ Utilization of backboards for spinal immobilization during transport should be judicious, so that the potential benefits outweigh the risks.



# Challenges

## Change in mindset

- ▶ First responders
- ▶ Supervisory staff
- ▶ Trauma centers
  - ▶ Nurses
  - ▶ Physicians
  - ▶ Trauma surgeons





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## ***Selected Topics: Prehospital Care***

### **ASSESSING ATTITUDES TOWARD SPINAL IMMOBILIZATION**

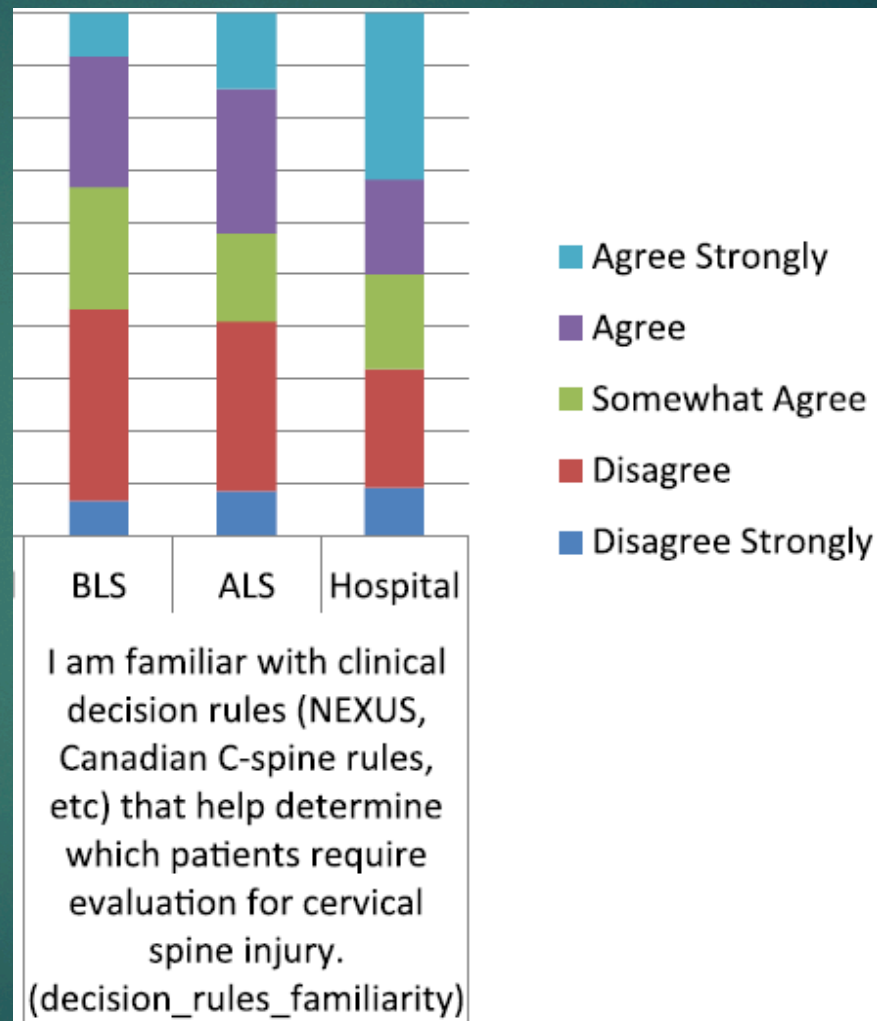
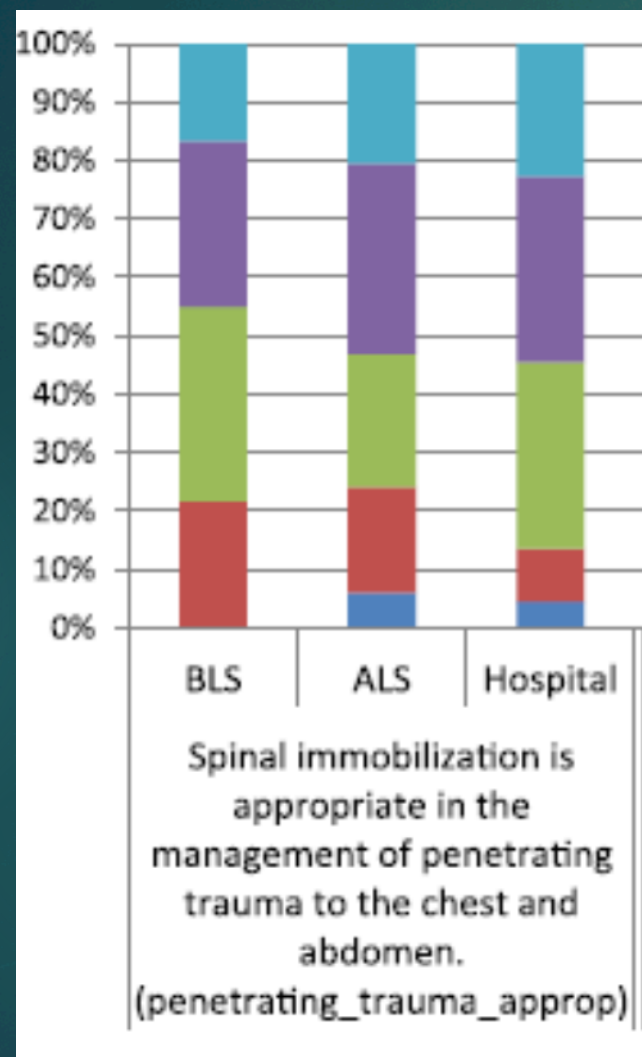
Andrew J. Bouland, BS, EMT-B,\*†‡ J. Lee Jenkins, MD, MSC,§ and Matthew J. Levy, DO, MSC†§

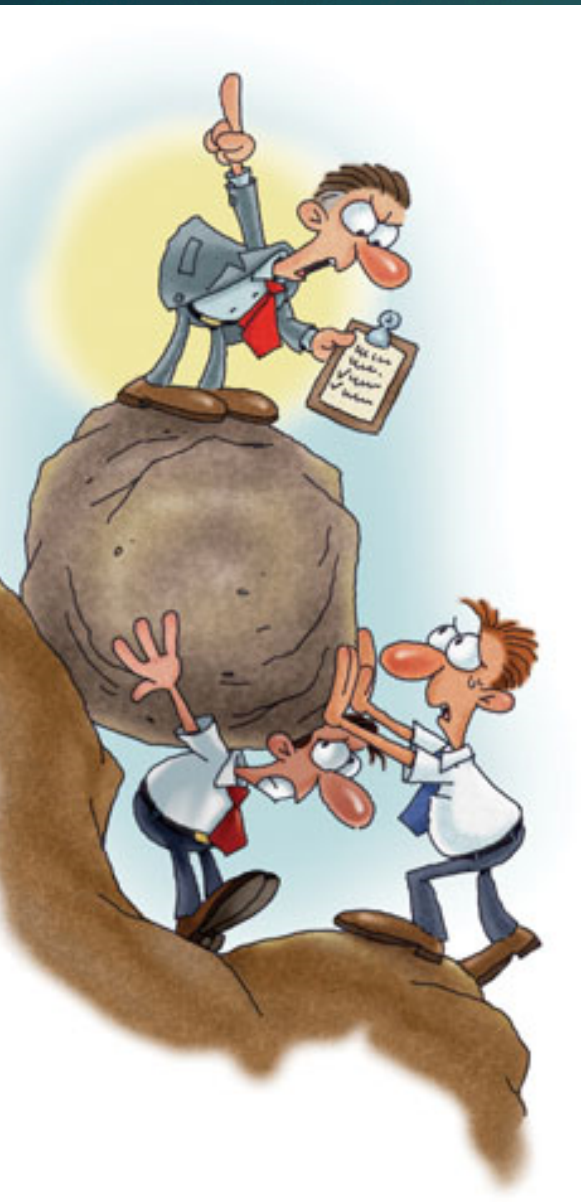
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- ▶ Meeting of medical directors
  - ▶ Spontaneously and independently working on this issue
- ▶ Then the emails started to fly
  - ▶ And it was good



TREATMENT	DRUGS/PROCEDURES
<p>Indications for spinal motion restriction</p> <ul style="list-style-type: none"> <li>• Focal neurologic deficit on motor or sensory exam</li> <li>• High risk patients: <ul style="list-style-type: none"> <li>○ Ejection from vehicle</li> <li>○ Motorcycle crash &gt; 20 MPH</li> <li>○ Auto vs. pedestrian or bike at &gt; 20 MPH</li> <li>○ Axial load to head (i.e. diving)</li> <li>○ Fall from 3 times patient's height</li> </ul> </li> <li>• Low risk patients who: <ul style="list-style-type: none"> <li>○ Have point tenderness on palpation of spinous process</li> <li>○ Are not reliable <ul style="list-style-type: none"> <li>▪ Are not at baseline level of alertness</li> <li>▪ Have evidence of clinical intoxication</li> <li>▪ Have a distracting injury</li> <li>▪ Are unable to communicate adequately</li> </ul> </li> </ul> </li> <li>• Patients who do not have any of the above findings may be transported without a cervical collar.</li> <li>• Utilize the long spine board, short board, or Kendrick's Extrication Device (KED) for extrication purposes only.</li> </ul>	<p><b><u>First Responder:</u></b> Manual in-line stabilization of the c-spine Extrication using long spineboard, short spineboard or KED</p>
	<p><b><u>EMT:</u></b> Cervical immobilization using a cervical collar</p>
	<p><b><u>Paramedic:</u></b></p>



**The use of a long spine board, short spine board or KED is not a benign procedure.**



# The Effect of Change



Thank you



