Backcountry Management of Spinal Injury

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Outline

- Disclaimer
- Scope of the Problem
- Data
- Conflict
- “Current” Guidelines and Recommendations
- Summary

Disclaimer/ Reality Check

Disclaimer/ Reality Check

GREY

The Scope of the Problem

- Approximately 280,000 people in the US have permanent damage from SCI
  - Approximately 17,000 new SCI cases each year
    - National Spinal Cord Injury Statistical Center

The Scope of the Problem

- Over 2 million people/ year in the US are fully immobilized with spinal precautions

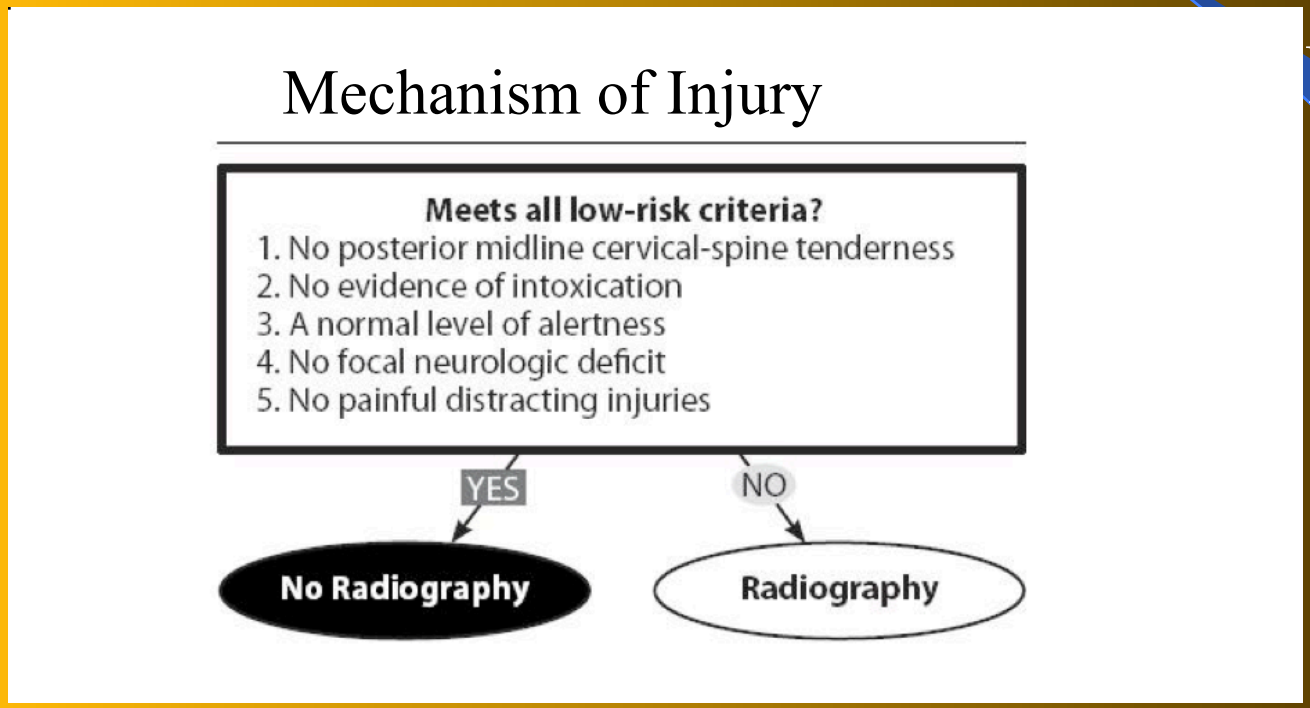
The Scope of the Problem

- In a traditional EMT course, approximately 10% of didactic time and 25-50% of practical review/ scenarios are dedicated to spinal cord management or have spinal immobilization as a major component

The Scope of the Problem

- Backcountry evacuations of patients with full spinal protection are time consuming, expensive, hazardous to rescuers and patients

The Data



NEXUS (National Emergency X-Radiography Utilization)

We have had, for YEARS, robust, specific, sensitive tests to detect/ predict spinal injury

The Conflict

- There is no evidence…
- *The concept of spinal immobilization has been predicated entirely on philosophical, theoretical, and medicolegal grounds, and the justification for its use remains unchanged despite more than 4 decades of widespread use.*

WMS Practice Guidelines, 2014

The Conflict

- There is no evidence…
- *Despite a lack of evidence clearly supporting spinal immobilization, an absence of documented cases of neurologic deterioration as a result of inadequate immobilization, and in the face of accumulating data challenging both the philosophical and theoretical grounds of immobilization, no randomized controlled trials have yet been performed in an attempt to validate its ongoing use or stratify any risk-benefit ratio*

WMS Practice Guidelines, 2014

The Conflict

- There is no evidence…
- *Although the expert panel was unable to identify a single well-documented case in the literature of prehospital neurologic deterioration as a direct consequence of improper or inadequate immobilization, many cases have documented severe morbidity, and even mortality, secondary to immobilization itself.*

WMS Practice Guidelines, 2014

The Conflict

- There is no evidence…
- *There is no evidence to support spinal immobilization in general, (yet) a great deal of time is spent educating EMTs in the process of spinal immobilization.*

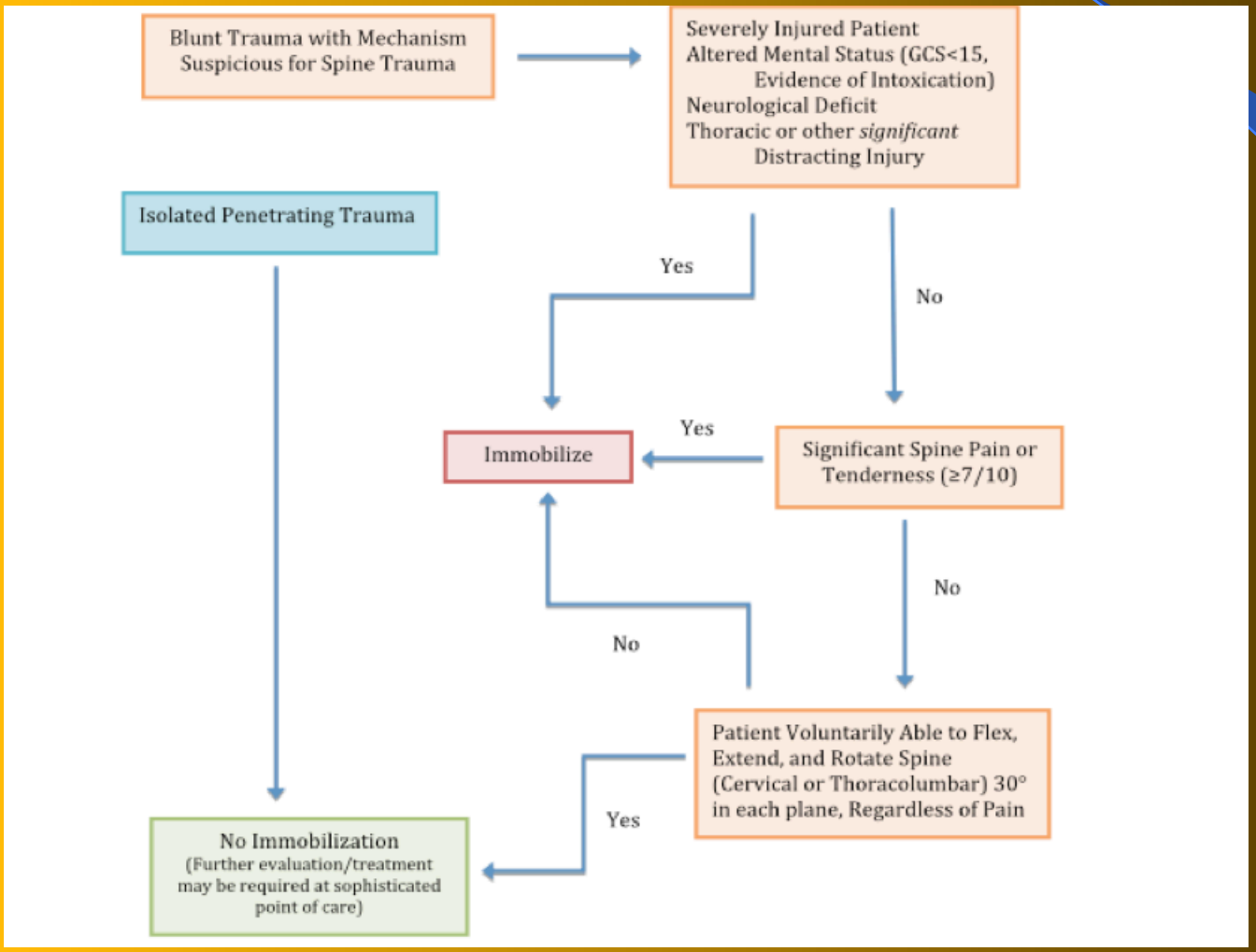
Best Practice: Spinal Precautions, Montana Board Of Medical Examiners,
Montana Prehospital Treatment Protocols, 2014

The Guidelines

- It has been pointed out that the evidence, and consequently our recommendations, fails to support immobilization in general. If this is true, why include an algorithm for immobilization at all? We realize that the evidence currently available, although likely accurate, is not high level. This, combined with the fact that many will consider the very notion of discarding immobilization in its entirety heresy, makes our algorithm a reasonable transition to a new paradigm while allowing (and hopefully promoting) further study to improve our understanding of spine injury, spinal protection, and the quality of evidence on which to base further recommendations.

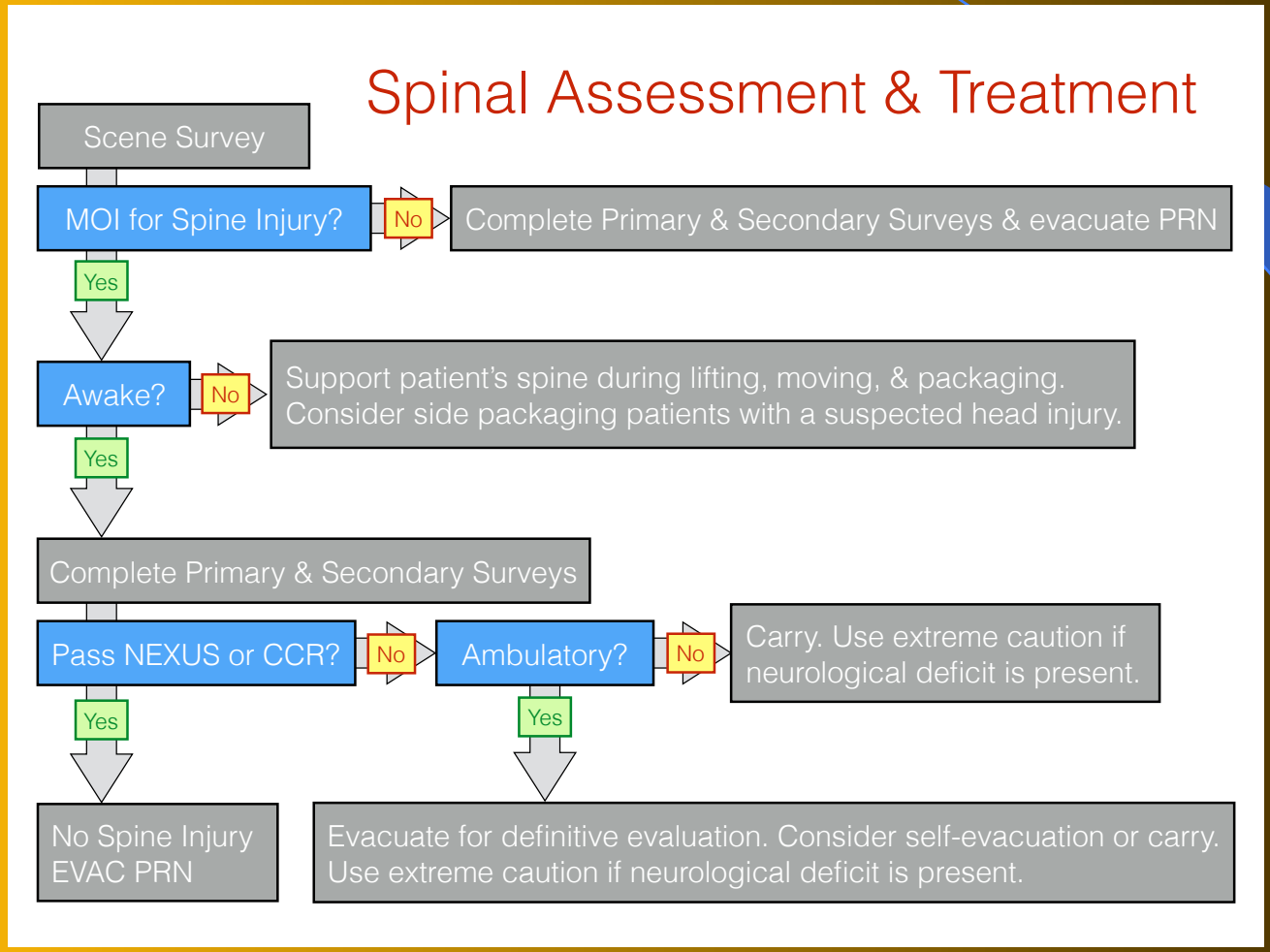
WMS Practice Guidelines, 2014

The Guidelines: Backcountry



Wilderness Medical Society Practice Guidelines for Spinal Immobilization

The Guidelines: Backcountry



Wilderness Medicine Training Center (WMTC), Paul Nicolazzo

Summary

- Shift in Understanding and Emphases allows for more flexibility and common sense
  - Most damage probably occurs at time of injury
  - On scene management can focus on other priorities
  - Self/ Assisted-evacuation is not only acceptable but often preferable
  - A “Board” is viewed more as a transportation vs. immobilization device, and should be constructed and treated as such