



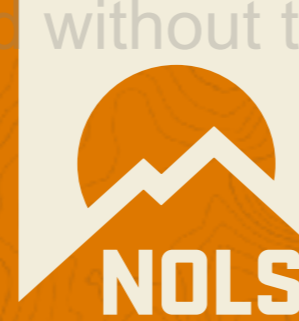
MEDICAL DECISION MAKING CASE STUDIES MATTERS OF JUDGEMENT

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NOLS WILDERNESS MEDICINE

**WILDERNESS RISK MANAGEMENT
CONFERENCE**

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This workshop will explore medical decision making through discussion of illustrative NOLS case studies. We will look at how medical protocols can be used to guide decision-making and the reality of clinical judgment in the field.



THE WFR VERSUS REALITY

In WFR courses patients have classic symptoms, treatments usually work, and time is compressed.

In the real world patients aren't "textbook" and changes in presentation can occur slowly.

In WFR courses we often stop at the EVAC decision.

In the real world evacuation can be difficult, lengthy, and stressful and long term care is a reality

THE WFR RECERT VERSUS REALITY

In the WFR Recert we start trying to predict patterns and looking for “the answer”.

In the real world patients aren’t “textbook” and often there is no “answer”.

In WFR Recert courses we equate our limited experience for clinical judgment.

In the real world our decision-making is easily hijacked when we make the patient fit out experience base.

How can you prepare for the tough decisions? What can we learn from others’ experience?

MY BELLY HURTS

- Day 2: “My belly hurts” → He’s homesick. No PAS
- Day 3: “My belly hurts” → He’s homesick. No PAS
- Day 4: “My belly hurts” → He’s homesick. **Or is he?**



CONFIRMATION BIAS v. CONFLICTING DATA

- The group was homesick
- Lots of students complained of belly aches, headaches, difficulty sleeping
- This student had some tough challenges at home
- There was a mechanism of injury
- The student has a rigid abdomen
- The student's left testicle was approximately 3x larger than his right



ALWAYS DO AN ASSESSMENT



TO IMMOBILIZE OR NOT TO IMMOBILIZE?

A TALE OF 3 MOIs

MOI?

Student flipped his kayak and struck his head on a rock under the water then swam to shore.

MOI?

Student slipped off a log landing on his back, paddled 12 miles to camp, then informed instructors of his fall.

MOI?

Student tripped and fell, hit her head on a rock, passed FSA. Later immobilized when neck became sore

MECHANISMS FOR SPINAL INJURY (Canadian Spine Rules)

- Falls associated with loss of responsiveness/altered mental status
- High velocity impact (e.g., car/ATV crash, climbing falls, high speed skier/biker crashes)
- Falls from greater than 3 feet (1 meter) landing on the head, back/side or buttocks



IT'S NOT JUST US

“...any impact of more than 5mph or fall from more than 5ft should be backboarded automatically....”

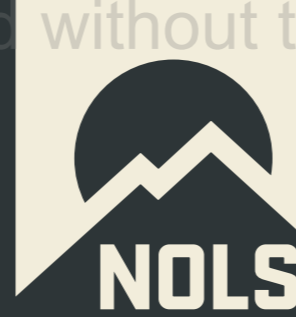
-Paramedic

“There has been exactly ONE study done asking if our paranoid obsession with spine immobilization is justified by evidence (Hauswald, 1998)... Progressive EMS doctors are questioning the idea that we need to be so freaked out by possible spine injuries AND the idea of board and collar for all on mechanism alone has long been shown to cause more harm than benefit. The paradigm is shifting.”

-MD

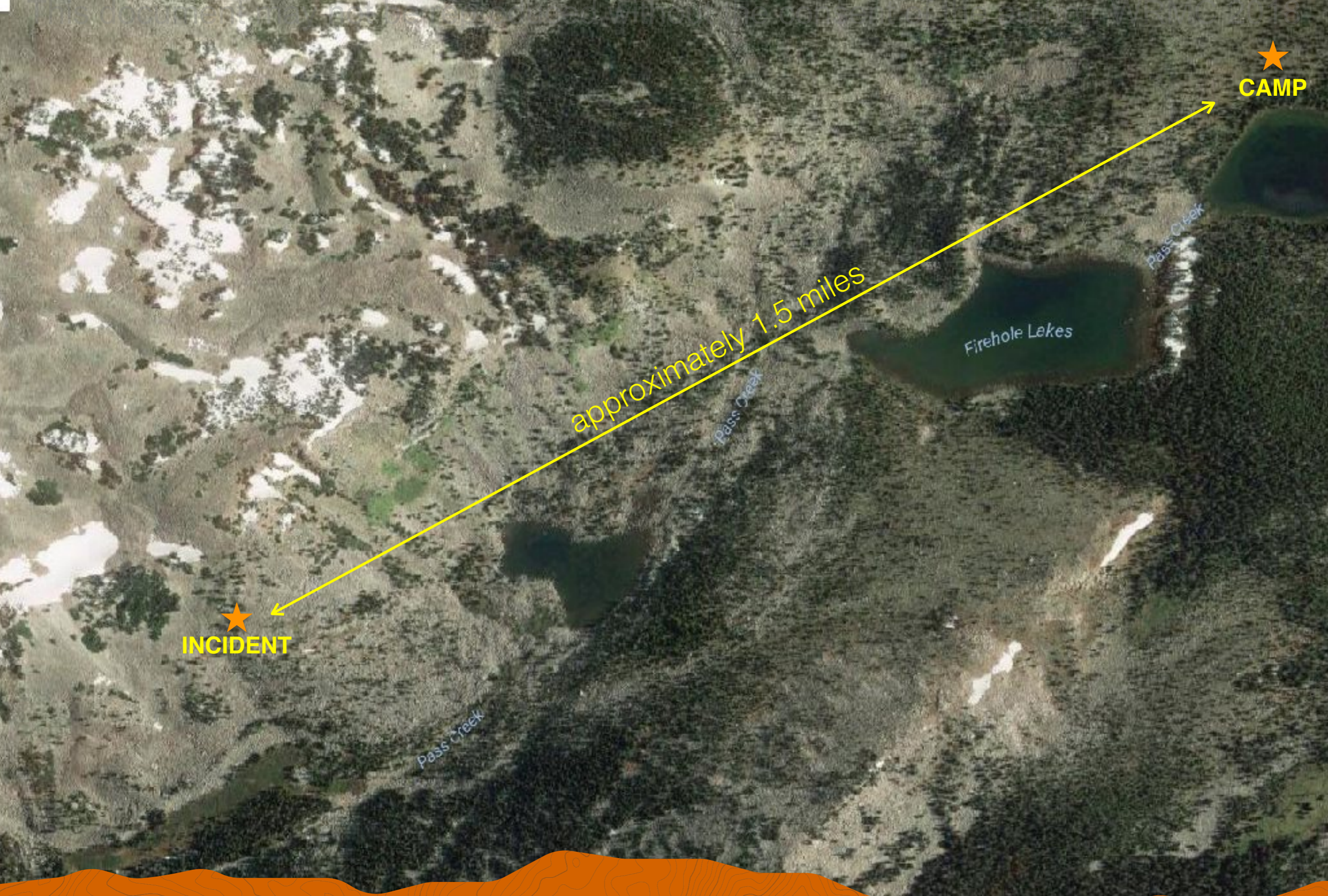
GOOD FIELD IMMOBILIZATION IS TOUGH





FEAR IS A TRAP





INCIDENT

approximately 1.5 miles

CAMP

Firehole Lakes

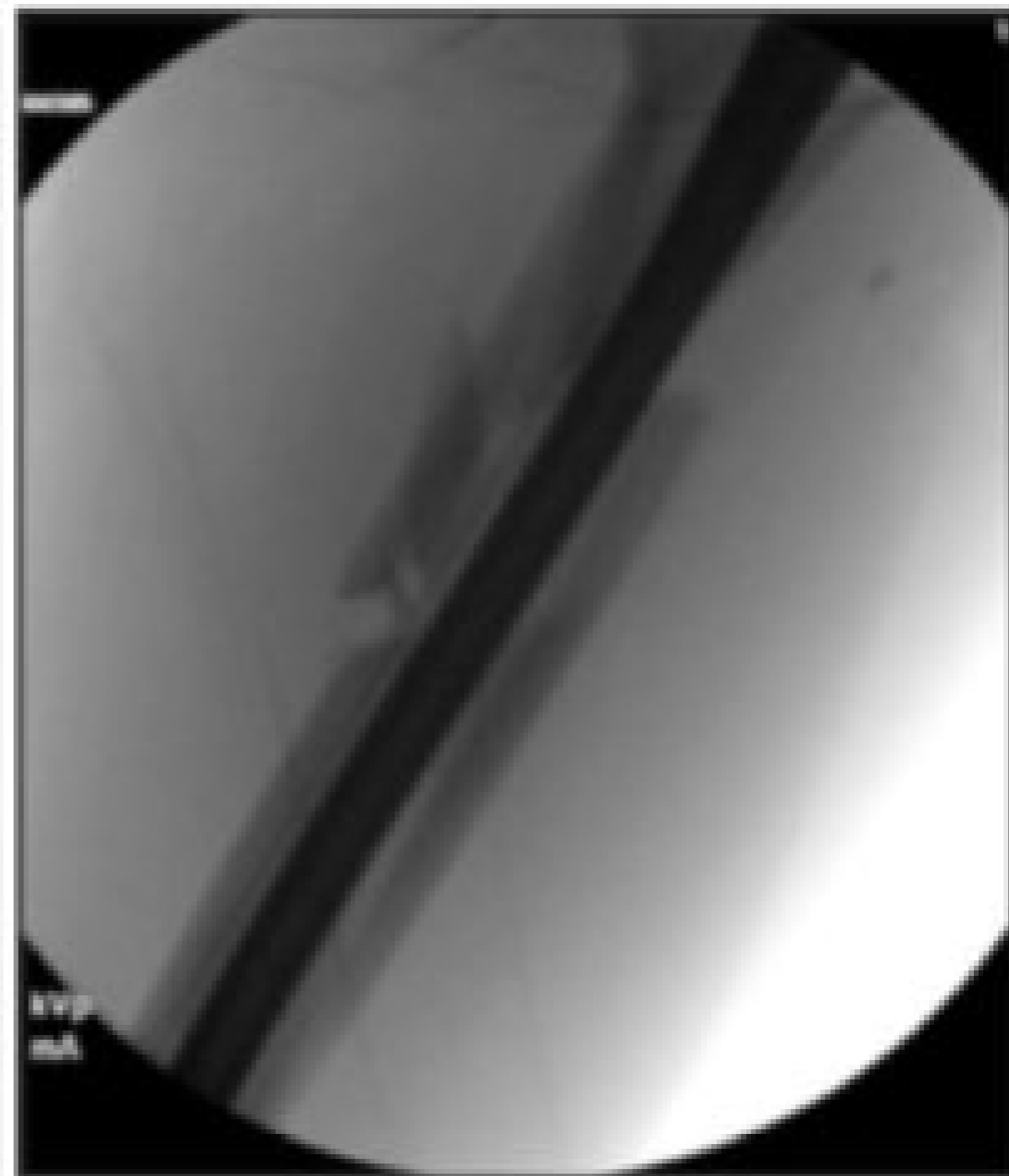
Pass Creek

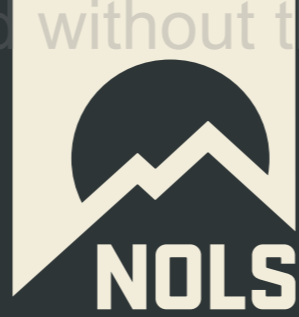
Pass Creek

Pass Creek



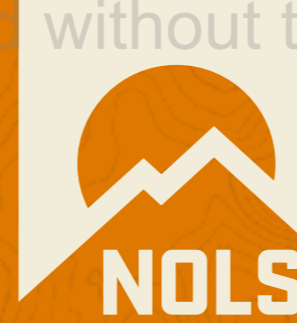
POST SURGERY



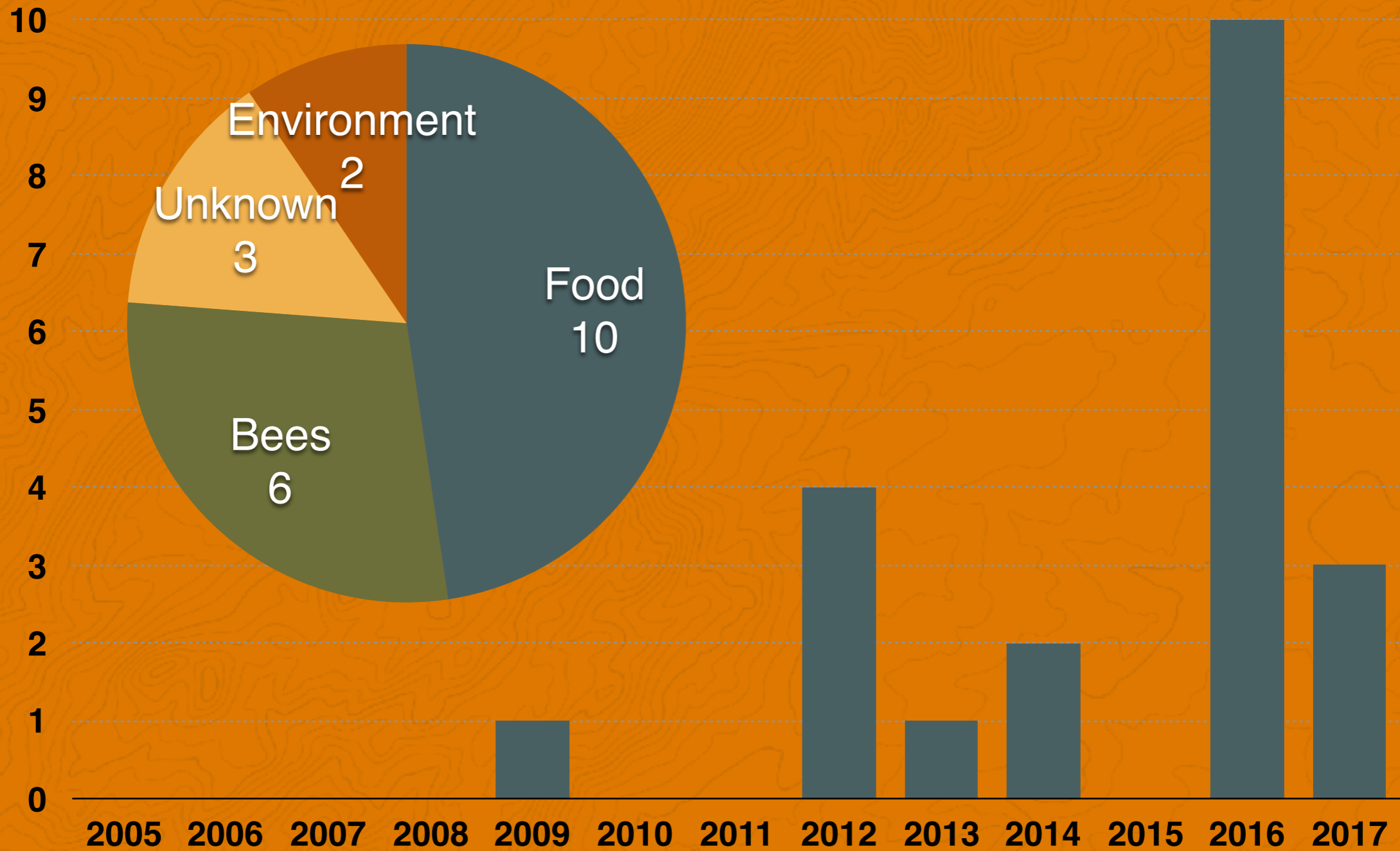


RISK VERSUS BENEFIT





Anaphylaxis at NOLS 2005-2017



Anaphylaxis

peanut exposure
neck, throat, and tongue swelling
throat hurt with swallowing and talking
cold
difficulty breathing and talking
hives on throat and neck
nauseous, vomited once

75 mg of Benadryl
60 mg of Prednisone
0.3 mg of personal Epinephrine

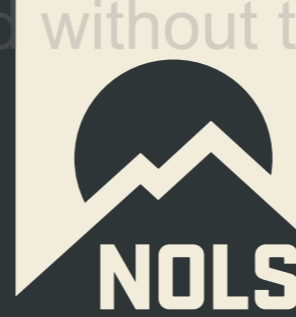
40 mg of Prednisone 24 hours after
40 mg of Prednisone 48 hours after

Dehydration, Exhaustion, Viral Illness? **Not Anaphylaxis**

sunflower exposure 6 hours earlier
sore throat last night and this morning
groggy but can hike
cold after crossing a creek
severe shivering
wavers between verbally responsive
and alert for 4 hours

0.3 mg of Epinephrine
50 mg of Benadryl
60 mg of Prednisone

evacuated by helicopter 24 hours
later

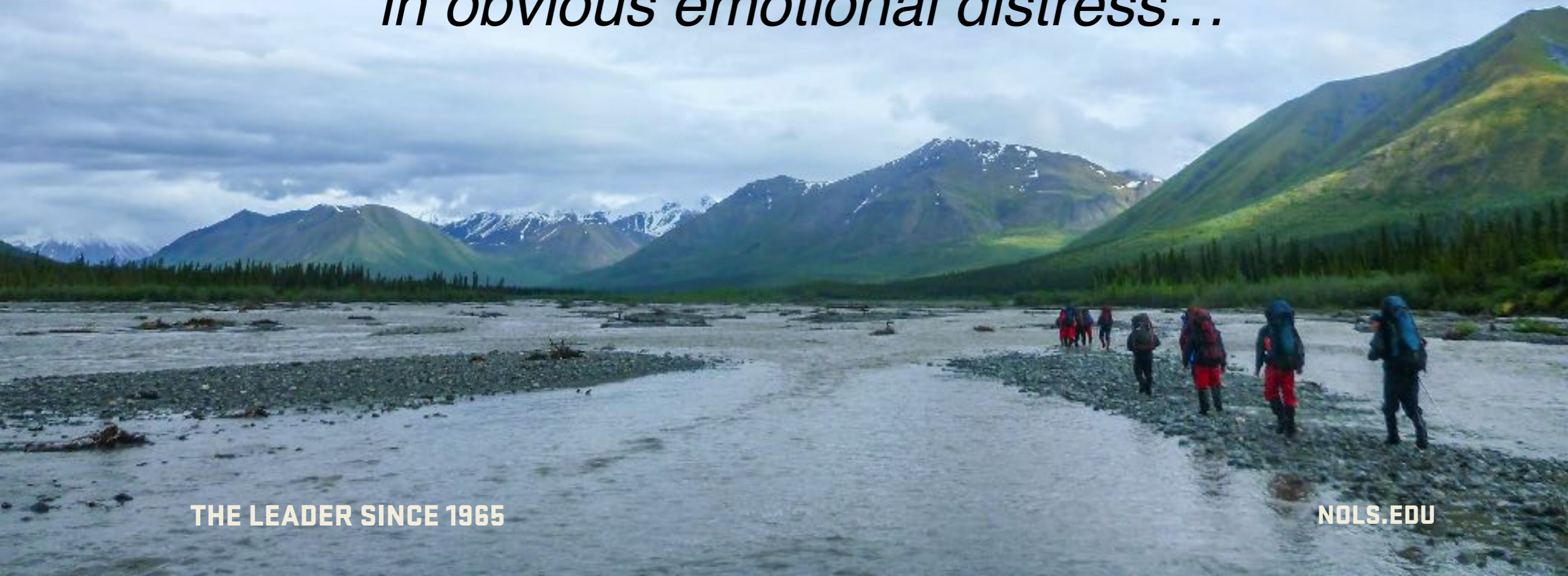


BEWARE OF PRIMING



DAY 14 OF A 29 DAY ALASKA WILDERNESS COURSE

*J was found sitting in the dark...hands over his ears...
crying...responding only with a nod or shake...
in obvious emotional distress...*





PSYCHOLOGICAL FIRST AID

Create a Safe Environment

- Reduce chaos

- Remove patients from perceived threats

Create Calm

- Calm yourself

- Emphasize the present, the practical, the possible

Create Self-Efficacy

- Involve patients in their own care and rescue

- Remind patients of their strengths

Create Connection

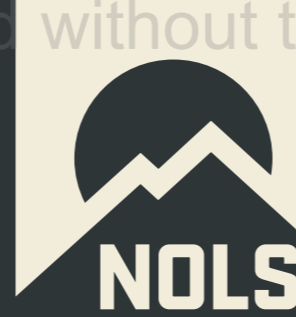
- Build relationships, use names

- Help people contact family and friends

Create Hope

- Reflect accurate, positive facts

- Communicate hope and evidence things will improve

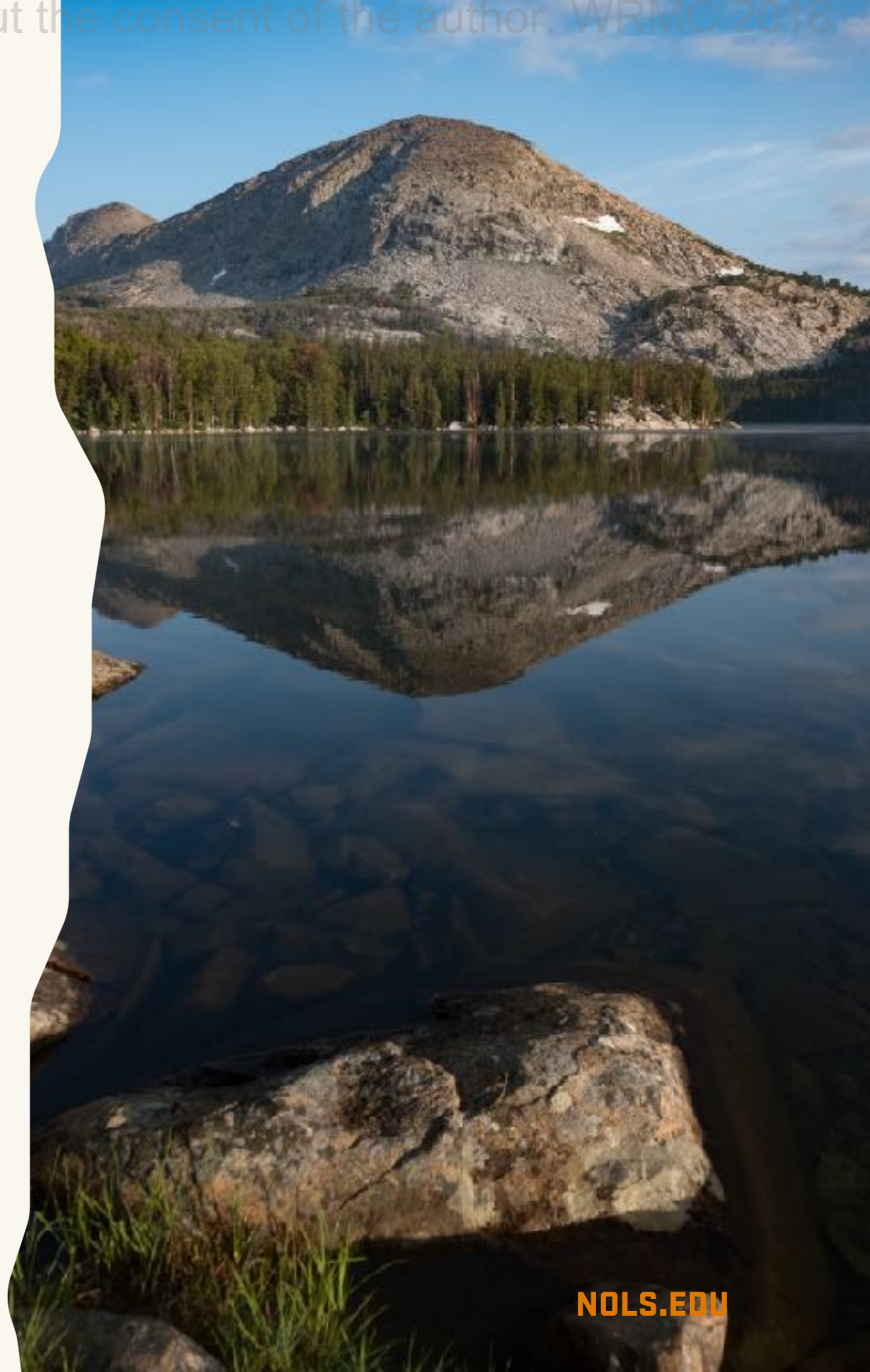


PFA TOOLS ARE GOOD FOR EVERYONE



IT WAS A HOT JULY DAY...

“first you slow down and
can't move
your body drops and you're
so tired
your mind slows
you don't panic you just
can't think
noise drowns out and your
vision becomes narrow and
smaller like a tunnel
the room tilts and slowly
turns on its side as
everything fades to black”

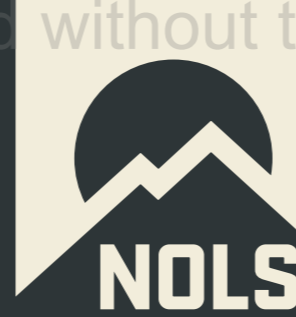




SYNCOPE

EVACUATION GUIDELINES

- Evacuate all syncope that occurs during exertion.
- Evacuate all events of syncope that are accompanied by: chest pain, headache, SOB, abdominal pain, known pregnancy, or with signs and symptoms of shock.
- Evacuate all patients with syncope that occurs without the presence of prodromal symptoms such as dizziness, light-headedness, pallor, diaphoresis, vision changes.
- Evacuate all patients with a syncopal episode who complain of residual signs and symptoms.
- Consider evacuating all patients over 65 years of age who have experienced a syncopal episode.



UPDATE YOUR PROTOCOLS



YOUR ACTION STEPS



1. Recall a patient you managed. Identify at least one thing that was different between providing care and your training. Share that with your peers.
2. In a remote setting, step away from the patient/scene, review/ verbalize your notes, and create physical or temporal distance before making key decisions. Treat the situation like a case study.
3. Add an extended (12 or more hours) scenario into staff training to prepare instructors for long term care responsibilities and stressors.

QUESTIONS?



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