

NOLS WILDERNESS MEDICINE

Curriculum Updates for WFR Recertification Courses

January 2025

Medicine is dynamic. We stay abreast of changes in practices and knowledge, and regularly update our curriculum. These are summaries of recent updates. NOLS Wilderness Medicine Curriculum Updates and resources are available at: <https://www.nols.edu/en/wilderness-medicine/resources/>

Stroke Assessment: We have incorporated the BEFAST Stroke Assessment into our neurological curriculum. This tool can help recognize if someone is having a stroke.

Balance: Does the patient have a sudden or recent loss of balance or difficulty walking? Are they dizzy?

Eyes: Can the patient see out of both eyes? Do they have blurry vision, double vision, or vision loss?

Facial Droop: Have the patient smile or show their teeth. It should be symmetrical.

Arm Weakness: Have the patient hold both arms out straight for 10 seconds with their eyes closed. Arms should not drift.

Speech Difficulty: Have the patient repeat back a phrase such as, "You can't teach an old dog new tricks." Should repeat correctly and without slurring speech.

Time: Document the onset of signs and symptoms.

Nasal Epinephrine: We recognize the potential of nasal epinephrine, which now has FDA approval and shows absorption comparable to intramuscular injections. The current name brand we are aware of is *Neffy*. While conclusive data on its effectiveness in treating anaphylaxis is still limited due to ethical challenges in clinical trials, future developments will bring more clarity. Ultimately, as with any treatment in wilderness medicine, the key is using what the patient has available. Patient preference and real-life usage will likely determine whether nasal or intramuscular epinephrine becomes the go-to option in patient care. None of this changes our existing Anaphylaxis curriculum.

Communicable Diseases and Patient Approach: During the COVID-19 pandemic, we recommended donning a mask before every patient interaction. Today, we recommend evaluating your patient and making an informed decision about whether or not you need to wear a mask, the patient should wear a mask, or you should use additional PPE. If your patient is showing signs of a respiratory infection, it may be wise to put on a mask.

Jaw Dislocations: We have historically taught how to reduce jaw dislocations in the WFR curriculum. After some research and many discussions, we have decided to remove jaw dislocations from our WFR courses.

Stress Continuum: Responders are at an elevated risk for stress injuries. One of the first steps in prevention is recognition. Many responders are using a stress continuum to monitor the predictable pattern of injury formation after exposure to stress and impactful events. A stress continuum is an awareness tool utilized in operations to support identification and care of stress injury before it progresses. For additional training and tools, please visit responderalliance.com.

INDIVIDUAL STRESS CONTINUUM

GREEN READY	YELLOW REACTING	ORANGE INJURED	RED CRITICAL
Healthy Sleep	Sleep Loss	Sleep Issues/ Nightmares	Insomnia
Healthy Personal Relationships	Distance From Others	Disengaged Relationships	Broken Relationships
Spiritual & Emotional Health	Change In Attitude	Feeling Trapped	Intrusive Thoughts
Physical Health	Fatigue	Exhausted	Anxiety & Panic
Emotionally Available	Avoidance	Physical Symptoms	Depression
Gratitude	Short Fuse	Emotional Numbness	Feeling Lost or Out of Control
Vitality	Criticism	Suffering	Thoughts Of Suicide
Room For Complexity	Lack of Motivation	Isolation	Blame
Sense of Mission	Cutting Corners	Burnout	Hopelessness
	Loss of Creativity		
	Loss of Interest		

ADAPTED FROM COMBAT AND OPERATIONAL STRESS FIRST AID BY LAURA MCGLADREY | RESPONDERALLIANCE.COM

Cardiac Emergencies Presentation: We have historically described “typical” versus “atypical” cardiac presentations. We have updated our language to be more inclusive of the wide range of cardiac emergency presentations we might see. Cardiac emergencies that have often been described as “silent” or “unusual” may, in fact, make up a significant portion of presentations.

How do we handle “protecting the spine” when we approach a patient?: Begin with a thorough scene size up. Can you tell what caused the incident? Are there signs of significant forces at work? How is your patient presenting?

- *If there are obvious signs of significant forces (MOI) or if your patient does not appear awake:*
Approach your patient and get permission to treat them. If they are standing or leaning against something, ask them to lie down. Provide manual protection, do your ABCs, and encourage them to remain calm. At D, gather more information about the MOI to confirm or rule out its significance for spine injury:
 - Trauma to the head 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, or buttocks (axial load)
 - Falls for a patient over 65 years of age
- If the MOI is still of concern (i.e. meets one of the above bullet points), maintain spinal protection and proceed with your assessment.
- If you determine that the MOI was insignificant for spine injury, release spinal protection at D and proceed with your assessment.
- *If there are no obvious signs of significant forces during your scene size-up and your patient appears awake:*
Proceed as stated above, without immediately protecting the spine. Proceed through ABC, and at D, gather more information about the MOI to confirm or rule out its significance. If you discover an MOI of concern, begin spinal protection, otherwise, continue your assessment.
- The principle is that we want to allow our assessment to dictate our actions. When we discover a significant MOI for spine injury, we act accordingly. The available data informs us that incidental movement does not harm patients, and that people with spine injuries tend to protect themselves. Our addition of “hands-on” care does not need to be applied instantly - we can be systematic, calm and deliberate in our approach.

Circulation, Sensation, Motion: Over recent years, we have experimented with different CSM language. Moving forward:

Hands: Circulation: palpable radial pulses
Sensation: identify finger being touched on each hand, no odd sensations
Motion: wiggle fingers, grip strength equal bilaterally

Feet: Circulation: palpable pedal pulses or warm feet
Sensation: identify toe being touched on each foot, no odd sensations
Motion: wiggle toes, push/pull equal bilaterally

Narcan: Like the AED, understanding how to use Narcan is valuable for us in our urban lives. Narcan, commonly administered via intranasal spray (2.0 - 4.0 mg per spray), is a narcotic antagonist which blocks narcotic effects by occupying, without activating, narcotic receptor sites. The duration of action is 30-90 minutes. It is used for the reversal of narcotic effects such as unresponsiveness/altered mental status, and especially respiratory depression, due to known or suspected overdose of narcotic drugs. All fifty states have passed laws to increase access to Narcan (naloxone) and to legally protect people such as first responders, family and friends, police officers and others who administer it. Narcan is now over-the-counter in the USA.

Pulse Oximeters: We’ve seen some medical news that a pulse oximeter can sometimes give misleading readings in people with dark skin, especially at lower oxygen levels. We need to be aware of this and, as we should in all patients, pay attention to trends and other s/s of poor oxygenation, such as shortness of breath and mucous membrane color.

Resources for different skin colors: There are resources available to us with medical images for people of color. Where we have permission to use images we have been updating the cold injury, bites and stings and wound slide shows with POC images.