

Draft - Minimum Guidelines and Scope of Practice for Wilderness First Responder (WFR)

Introduction

People who live, work, travel and recreate in the outdoors have specialized medical training needs not adequately met by traditional first aid programs. They need to care for patients in remote locations, in challenging weather, with questionable communication and support, limited equipment and the need to make independent decisions on care and transport. As a result, medical and outdoor specialists developed wilderness medicine courses in an attempt to meet these needs. Initially they were written independently and were opinion-based. Subsequently, they have evolved based on evidence and experience. This process has led to a de facto consensus about content and scope amongst the leading training organizations. In an attempt to clarify what this means, a number of the organizations have engaged in a more formal conversation that has resulted in what we hope will be several Scope of Practice (SOP) documents defining different training and practice levels.

Our intention is to assist the lay public, outdoor program administrators, individuals and any other major consumers of wilderness medicine courses in their choice of an appropriate course and credential level for their programs. Each SOP will describe the intended audience, the minimum guidelines for what graduates at each level of credential should know, what decisions they should make and what skills they should be able to perform. Because student and/or organizational needs can vary by location, population and experience, some SOP documents may provide for a minimum or core requirement and acceptable electives topics and skills. Ultimately it is the responsibility of each organization choosing medical training to understand its own individual institutional needs.

While we have strong opinions that these programs are best taught by skilled educators and experienced outdoor and medical people using hands-on practice, case studies, and realistic simulations as the prominent style, we are intentionally not commenting on hours per topic or specific teaching methodologies. These should remain the discretion of the individual program. Likewise, this document is not intended to speak to questions of competency measurement, organizational accreditation or instructor training or qualification. This document cannot be used to imply any type of endorsement of content or quality for a course provider.

Signatures

David E. Johnson MD, FACEP
President and Medical Director
Wilderness Medical Associates
Wilderness Medical Associates Canada

Tod Schimelpfenig EMT, FAWM
Curriculum Director
Wilderness Medicine Institute of the
National Outdoor Leadership School

Paul Nicolazzo
Director
Wilderness Medicine Training Center

David McEvoy
Director
Aerie

Frank Hubbell, DO
Co-Founder/Medical Director SOLO
Board of Medical Directors, State of
NH

Lee Frizzell, WEMT
Co-founder/Executive Director SOLO

Carl Weil
Director
Wilderness Medicine Outfitters
Fellow of the Academy of Wilderness
Medicine

Pat Malone, Director
Initiative for Rural Emergency Medical
Services
University of Vermont.

Justin S. Padgett, MS, NREMT-P
Executive Director
Landmark Learning

Andrew D. Cull
Chief Executive Officer
Remote Medical International

Nadia Kimmel
Director
Desert Mountain Medicine

Mike Ditolla MS, WEMT-P FAWM
Program Director
University of Utah, Center for
Emergency Programs

Mike Webster
Executive Director
Wilderness Medical Associates Canada.

David Yacubian
NatureBridge
Director of Risk Management

Draft - Minimum Guidelines and Scope of Practice for Wilderness First Responder (WFR)

Wilderness First Responder Overview

A Wilderness First Responder (WFR) course is primarily intended for non-medical professionals:

- for whom first aid delivery is often a secondary responsibility,
- acting as a primary care giver in a remote setting or as a second rescuer for a higher trained person,
- with the outdoor skills needed to participate in and/or lead the trip and who have an effective emergency action plan,
- traveling alone, with family, and/or friends,
- employed as wilderness guides, instructors and educators, SAR team members, ski patrol, medical personnel for adventure races/events, wild land firefighter medical team member.

In the context of:

- multi-day to multi week domestic or international wilderness trips with unreliable communication and/or delayed medical or rescue support,
- locations where evacuations are primarily walkouts or carryout by the group with the WFR in charge, or with the assistance of local resources and where local EMS access may be delayed,
- the WFR may be called upon to make independent decisions on the need for and urgency of evacuation, and calls for outside assistance,
- medical equipment is limited, communication unreliable, transport delayed and/or difficult and often by human power, care takes place in austere or harsh environments.

Additional certification required of a WFR

- CPR for adults and children

Definitions:

- Elective. Skills and topics which are within the WFR SOP, but can be included or excluded at the discretion of the training provider.
- Standard courses are those where lecture, skill labs, and simulations are taught as a unit with a minimum 70 contact hours.
- Distance Learning courses are those where didactic information is taught via widely accepted distance learning methods—books, DVD, on-line, etc—and where skill labs and simulations are taught during a separate practical session with a minimum of 45 contact hours.

Focus and Content Overview

- Minimum 70 hour course with an emphasis on practical skills and drills.
- Minimum age of 16
- Focus is on:
 - performing a physical exam to identify obvious injuries or abnormalities, assessing signs, symptoms, and vital sign patterns, along with obtaining a relevant history (e.g., SAMPLE),
 - prevention of problems anticipated by the activity and environment,
 - treatment focused on stabilization of emergencies, initiation of specific and appropriate treatments (splints, wound care, spine immobilization, managing environmental threats) and assisting patients utilizing their personal medications,
 - conservative decisions on the need for, urgency of and appropriate type of evacuation and for interventions appropriate for this level of training.

Draft - Minimum Guidelines and Scope of Practice for Wilderness First Responder (WFR)

Core Skills

Patient Assessment and BLS

- Evaluate the scene and assess for safety and causes, emphasizing personal and team protection.
- Perform an Initial Assessment/Primary Survey to identify and treat life threats.
 - Respiratory System
 - Manually open, maintain and protect an airway with standard BLS techniques and the recovery position.
 - Provide adequate ventilations by mouth to mask.
 - Circulatory System
 - Assess for pulse and signs of life, administer chest compressions, use AED, understand start/stop considerations for CPR in the remote context.
 - Control serious bleeding with well-aimed direct pressure, pressure bandage or tourniquet.
 - Nervous System
 - Assess LOC/LOR, identify a potential mechanism for spine injury, protect the spine and minimize movement.
 - Monitor and maintain airway control and breathing for people with an impaired LOC/LOR.
- Perform a Secondary Survey/Focused History and Physical Exam
 - Perform a physical exam to identify obvious injuries or abnormalities.
 - Measure and monitor vital signs (LOC/LOR, P, RR, Skin Signs).
 - Obtain a patient history (SAMPLE).
 - Monitor a patient for changes over time.
 - Document findings, ongoing assessments and treatments in writing.
 - Deliver a concise, complete and clear verbal patient report.
- Care for immobilized patients for hours or days including: assistance with urination and defecation or diapering, massage, bed sore and pulmonary embolus prevention, maintaining core temperature, emotional support and hydration.
- Plan and conduct evacuation or initiate contact with outside resources.
- Elective skills
 - BP with sphygmomanometer and stethoscope
 - Infant CPR
 - AED (automatic external defibrillator)

Circulatory System

- Know common wilderness causes of shock (vomiting/diarrhea; bleeding).
- Recognize signs, symptoms and vital sign patterns of low volume shock (hypovolemic), low pressure shock (cardiogenic or pump failure), and low resistance shock (neurogenic) and an acute stress reaction.
- Initiate appropriate treatment
 - Oral fluids for patient's with normal mental status.
 - Stabilize injuries.
 - Control external bleeding with well-aimed direct pressure, pressure/clot enhancing bandage or tourniquet.
 - Protecting from adverse environmental conditions.
- Decide on need and urgency of evacuation. Consider ability to stop and restore fluid loss, responsiveness to treatment and the trend in vital signs.

Acute Coronary Syndrome

- Recognize signs and symptoms.
- Initiate appropriate treatment
 - Stop activity.
 - Support patient with their personal medications (e.g. prescribed nitro and aspirin).
 - Initiate evacuation.

Draft - Minimum Guidelines and Scope of Practice for Wilderness First Responder (WFR)

Respiratory System

- Know the most common causes of respiratory distress and respiratory failure (asthma, airway obstruction, trauma).
- Recognize signs and symptoms of respiratory distress and respiratory failure (asthma, airway obstruction, trauma).
- Recognize signs and symptoms of hyperventilation.
- Recognize chest trauma.
 - Assess for and recognize chest and lung injury.
- Initiate appropriate treatment to include:
 - Maintain appropriate and comfortable position.
 - Maintain patent airway and support ventilation.
 - Assist patient with their personal medications (e.g. prescribed inhaler).
 - Stabilize/support the injured area.
 - Seal an open chest wound.
- Decide on need and urgency of evacuation. Consider trend in respiratory status, presence of abnormal mental status or skin color, and worsening symptoms despite treatment.
- Elective skills
 - Assess lung sounds with stethoscope for presence v absence, clear v noise, wheezes and crackles.
 - Medical oxygen (including appropriate delivery devices e.g., cannula or mask; airway management devices e.g. OPA, NPA, and PPV; and Mouth-to-mouth, mouth-to-mask or BVM ventilation as needed.)

Nervous System

Traumatic causes of abnormal mental status

- Recognize signs and symptoms of head injury.
 - Alteration of mental status
 - Loss of consciousness
 - Confusion, disorientation
 - Persistent fatigue, light sensitivity
- Recognize signs and symptoms of serious head injury with increased intracranial pressure (ICP).
- Initiate appropriate treatment.
 - Protect the airway.
 - Protect the spine.
 - Protect the patient from environmental extremes.
 - Monitor the patient for changes in mental status.

Non-traumatic causes of abnormal mental status

- Know common causes of abnormal mental status (e.g. trauma, extremes of temperature, inadequate oxygen, low blood sugar, seizure, stroke/CVA, toxins).
- Recognize abnormal mental status.
- Initiate appropriate treatment.
 - Oral sugar
 - Cooling in the presence of heat stroke
 - External warming in the presence of mild hypothermia
 - Ventilation for a hypoxic patient
 - Protect the patient (airway, spine, environmental extremes)
- Decide on need and urgency of evacuation. High risk problems include persistently altered mental status/disorientation/decreased level of consciousness, no improvement despite treatment, signs of increased ICP.

Trauma

Draft - Minimum Guidelines and Scope of Practice for Wilderness First Responder (WFR)

Spine Injury

- Recognize a high risk mechanism of injury for spine.
 - Fall associated with loss of consciousness
 - Trauma resulting from high velocity impact (e.g., MVA, climbing falls, high speed skier/biker)
 - Falls from greater than 3 ft (1 meter)
 - Landing on head or buttocks (axial loading)
- Recognize signs and symptoms of possible spine injury.
 - Spine tenderness and pain
 - Loss or impaired motor or sensory function
 - Unconsciousness or abnormal mental state
- Initiate appropriate treatment.
 - Stabilize the spine with hands or adjuncts (e.g. improvised or commercial c-collar).
 - Rolls, lifts and extrication as needed to facilitate patient examination and protection
 - Selective spine protocol (CSR, NEXUS or modified NEXUS criteria)
 - Stabilization/protection on a litter, vacuum splint or backboard (or protected on the ground) for obvious spine injuries or spines that cannot be cleared of potential injury.
- Decide on need and urgency of evacuation. High risk problems include s/s of spine or spinal cord injury.
- Elective skill
 - Improvised litters or stretchers

Soft Tissue Injury

Wounds

- Recognize life-threatening bleeding.
- Initiate appropriate treatment.
 - Control bleeding with well-aimed direct pressure, pressure/clot enhancing bandage or tourniquet.
 - Tourniquets should not be released if the patient is in shock or there is a complete amputation. In other situations a release attempt within 2 hours of application in a stable patient is acceptable. Program or service protocols or medical direction should ideally be consulted before this decision is made.
- Recognize simple versus high risk wounds (e.g. grossly contaminated, marine, crushing, open joint spaces, animal bites).
- Initiate appropriate treatment.
 - Clean wounds by removing debris scrubbing and irrigating (potable water under pressure, dilute povidone-iodine solution or other agents).
 - Bandage wounds.
 - Manage blisters, splinters and fishhook injuries (prevention and treatment).
 - Manage impaled objects (more than a fishhook or splinter).
 - Remove airway obstructions.
 - Remove objects impaled from limbs only if unable to stabilize, will easily fall out, prevents transport or unable to control bleeding because of the object.
 - Manage amputations.

Infections

- Recognize signs and symptoms of local versus systemic infection.
- Initiate appropriate treatment for local versus systemic infection.
 - For local infections: warm compresses, promote drainage, monitor
 - For systemic infections: warm compresses, promote drainage, monitor and evacuate
- Prevention: MRSA awareness, hygiene

Burns

- Recognize superficial, partial and full-thickness burns.
 - Assess depth (superficial v deep).
 - Approximate extent.

Draft - Minimum Guidelines and Scope of Practice for Wilderness First Responder (WFR)

- Identify high risk areas (e.g. palms and soles, face/airway, genitals).
- Initiate appropriate treatment.
 - Cool and protect with clean, non-adherent bandage.
- Decide on need and urgency of evacuation. Most burns are evacuated due to patient comfort, inability to travel or participate or lack of dressing.

Musculoskeletal Injuries

- Recognize signs and symptoms of musculoskeletal injury
- Differentiate between stable and unstable injuries.
 - Inability to use
 - Angulated
 - Feels unstable
 - Persistent distal ischemia
- Recognize signs and symptoms of high risk problems associated with musculoskeletal injuries.
 - Fractures of the femur or pelvis
 - Open fractures
 - Persistently impaired CSM
 - Involvement with a critical system
- Initiate appropriate treatment.
 - Treat stable injuries using RICE and a brace/tape as needed.
 - Treat unstable injuries with:
 - Gentle traction into position for angulated long bones
 - Splints that provide adequate stabilization, are comfortable for extended care situations and allow for ongoing monitoring of perfusion
 - Wound care for open fractures
 - Treat dislocations with:
 - Reduction of shoulder, patella, obvious digit and jaw dislocations.
 - In the case of impaired CSM for any dislocation use traction and reposition to improve CSM and comfort.
- Decide on need and urgency of evacuation. High risk problems include open fractures, volume shock and altered CSM secondary to an injury.
- Elective skill:
 - Traction splints, improvised or commercial, for mid-shaft femur fractures.

Environmental Medicine

Heat Illness

- Recognize signs and symptoms of heat exhaustion/dehydration, hyponatremia and heat stroke
- Initiate appropriate treatment
 - Heat exhaustion/dehydration
 - Oral fluids and electrolytes
 - Evacuate if not improving
 - Heat stroke
 - Aggressive, immediate cooling
 - Evacuate
 - Hyponatremia
 - Consider fluid restriction or replacing salt with foods or a salt-based solution.
 - Evacuate
- Prevention: Identify predisposing environmental conditions and prevention strategies
- Decide on need and urgency of evacuation. Evac heat stroke. Consider evacuation if unable to manage fluid status or persistent altered mental status.

Draft - Minimum Guidelines and Scope of Practice for Wilderness First Responder (WFR)

Hypothermia

- Recognize signs and symptoms of mild and severe hypothermia.
- Initiate appropriate treatment
 - Mild hypothermia
 - Oral fluid, calories, protect from the environment
 - Evacuate if not improving
 - Severe hypothermia
 - Prevent heat loss (hypo wrap with added heat)
 - Handle gently, evacuate
 - Avoid chest compressions
- Prevention: Identify predisposing environmental conditions and prevention strategies
- Decide on need and urgency of evacuation. High risk problems include severe hypothermia or inability to stabilize temperature.

Local Cold Injury (Frostbite and Non-Freezing Cold Injury)

- Recognize signs and symptoms of frostbite and non-freezing cold injury
- Initiate appropriate treatment
 - If not frozen, warm the injury
 - Field thawing only if minimal risk of refreezing
 - If frozen, ideally thaw in a warm water bath (99-102°F). Practically this may need to be skin to skin.
 - Protect from re-freeze, do not use radiant heat or massage.
- Prevention: identify predisposing environmental conditions and prevention strategies
- Decide on need and urgency of evacuation. Consider extent of injury, ability to use the injury or to protect from re-freeze.

Altitude

- Recognize signs and symptoms of Acute Mountain Sickness (AMS)
- Recognize signs and symptoms of HACE and HAPE
- Recognize patient's who need to stop ascent and acclimatize or descend/evacuate.
- Initiate appropriate treatment
 - Stop ascent if symptomatic
 - Descend if no improvement
 - Descend immediately in presence of shortness of breath (HAPE) and ataxia and/or mental status changes (HACE)
- Understand current recommendations for medications for prevention and treatment of altitude illness.
- Decide on need and urgency of evacuation. High risk problems include altitude illness with shortness of breath at rest on mild exertion (HAPE) and ataxia and/or mental status changes (HACE) or any patient with AMS who is not acclimatizing.
- Prevention: identify predisposing environmental conditions and prevention strategies

Lightning

- Know the common mechanisms of lightning injury and common presentation of injury (cardiovascular, neurological, burns)
- Initiate appropriate treatment including reverse triage.
 - Treat what you find
- Decide on need and urgency of evacuation.
- Prevention: Recognize high risk weather conditions and prevention strategies
 - Have a lightning plan, know local weather patterns, leave the scene and/or seek adequate shelter,

Draft - Minimum Guidelines and Scope of Practice for Wilderness First Responder (WFR)

Submersion - Drowning

- Initiate appropriate treatment
 - Respiratory support
 - Spine injury potential
 - Hypothermia
- Prevention: recognize high risk conditions and prevention strategies with an emphasis on personal safety when traveling or planning rescue
- Decide on need and urgency of evacuation. High risk problems include loss of consciousness or persistent respiratory distress.

Backcountry Medical Problems

A WFR needs to be familiar with a range of medical problems (flu-like, respiratory, diabetes, cardiac, altered mental status, UTI, vaginitis, testicular pain) which can present in remote circumstances. However, the scope of practice for a WFR remains identify, initiate reasonable and prudent field management and identify red flag signs and symptoms necessitating evacuation for potentially life-threatening problems including changes in level of consciousness, chest pain, shortness of breath and abdominal pain.

Flu-like illness, N/V/D, Fever, Cough/URI

- Recognize signs and symptoms of Flu-like illness
- Initiate appropriate treatment
 - Treat symptomatically. Focus on hydration.
- Prevention: Understand the role of camp hygiene (handwashing, kitchen sanitation food preparation and water disinfection)
- Decide on need and urgency of evacuation. Identify red flag evacuation criteria:
 - Vomiting and diarrhea (Evacuation: blood, fever, tenderness, dehydration)
 - Fever (Evacuation: abnormal mental state, headache, persistent high fever)
 - Cough/URI (Evacuation: respiratory distress, fever, coughing up colored phlegm)

Abdominal Pain

- Recognize signs and symptoms
- Initiate appropriate treatment
- Decide on need and urgency of evacuation. Identify red flag evacuation criteria:
 - Abdominal pain: (persistent local tenderness, fever, persistent vomiting, getting worse over 12 hrs, any noticeable blood in stool, urine, or vomit, signs and symptoms pregnancy, peritoneal signs)

Allergy

- Recognize signs and symptoms of local and mild allergic reactions
- Recognize anaphylaxis
- Initiate appropriate treatment
 - Treat local reactions with cool compresses, topical corticosteroid
 - Treat mild allergic reactions with oral antihistamine
 - Treat anaphylaxis with epinephrine via autoinjector, oral antihistamine and evacuation.
- Decide on need and urgency of evacuation

GU

- Recognize signs and symptoms of vaginitis (in females), UTI and testicular pain (in males)
- Initiate appropriate treatment
 - Treat vaginitis symptomatically with OTC medications
 - Treat UTI with hydration
- Decide on need and urgency of evacuation. Consider effectiveness of treatment.
- Prevention: Identify predisposing conditions and prevention strategies

Draft - Minimum Guidelines and Scope of Practice for Wilderness First Responder (WFR)

Dental

- Recognize signs and symptoms lost crown/fillings, broken teeth, avulsed teeth and dental infections.
- Initiate appropriate treatment
 - Dental hygiene
 - Covering lost fillings, broken crowns
 - Attempt to preserve avulsed teeth
- Decide on need and urgency of evacuation. Decisions are usually made on patient comfort.

Diabetes

- Recognize signs and symptoms of hypoglycemia and hyperglycemia
- Initiate appropriate treatment
 - Treat all diabetic emergencies with a change in LOC/LOR with oral sugar while maintaining a patent airway and until a blood sugar has been determined.
- Decide on need and urgency of evacuation. High risk problems include:
 - Any person who is unable to maintain blood sugar within their normal range.
 - Any person with altered mental status that does not respond to administration of glucose.
 - Any diabetic with an underlying infection and a fever

Eyes and Ears

- Recognize signs and symptoms of eye problems
- Initiate appropriate treatment
 - Irrigation and gentle removal for objects in eye
 - Cool compresses and dark glasses for snowblindness
 - Craft improvised sunglasses for traumatic eye injury or snowblindness.
 - Evacuate visual problems more than blurring, persistent irritation.
- Recognize objects in the ear, ear canal infections and changes in ability to hear.
- Decide on need and urgency of evacuation.

Poison Ivy, Oak, Sumac

- Recognize signs and symptoms of urushiol reactions
- Initiate appropriate treatment
 - Symptomatic treatment.

Sunburn

- Initiate appropriate treatment
 - Treat as a superficial burn
- Prevention: Understand the role of UV barriers; sunscreen and clothing.

Motion sickness

- Initiate appropriate treatment
- Prevention: Understand predisposing environmental conditions and prevention strategies

Draft - Minimum Guidelines and Scope of Practice for Wilderness First Responder (WFR)

Toxins

Poisoning

- Understand general principles of ingested, inhaled and absorbed poison management and CO poisoning
- Initiate appropriate treatment:
 - Ingested Poisons: if poison is non-corrosive, non-petroleum based and the patient is fully responsive induce vomiting. Otherwise dilute with water (If normal LOR, patient can swallow).
 - Inhaled Poisons: (commonly CO, occasionally other gasses e.g. volcanic fumes) Scene safety. Remove from exposure. administer O₂, if available.
 - Absorbed Poisons: remove contaminated clothing. Flush area with water and wash with soap.
- Decide on need and urgency of evacuation. High risk problems include altered LOC/LOR or signs of respiratory distress.

Snake bite

- Initiate appropriate treatment
 - Immobilize the limb
 - Compression wraps, which are controversial, according to local guidelines.
 - Avoid unproven or discredited treatments that may harm (ice, incision and suction, electricity, tourniquets, compression, meat tenderizer, etc)
 - Transport to a physician/hospital
 - Monitor for signs and symptoms of envenomation
- Decide on need and urgency of evacuation. High risk problems include any si/s of envenomation.
- Prevention: identify common human behaviors that are factors in snakebite incidents.

Arthropods (insects, arachnids e.g. scorpions, spiders)

- Initiate Appropriate treatment
 - Symptomatic treatment
 - Tick removal
- Decide on need and urgency of evacuation: High risk problems include any s/s of envenomation.
- Prevention: Understand the role of clothing, netting, repellents, insecticides in prevention of disease transmission.

Medical Legal

- Understand the following legal concepts as they apply to wilderness medicine
 - Duty to Act and Good Samaritan Laws
 - Scope of practice and standards of practice
 - Consent and confidentiality
 - Understand the concepts of certification, licensure, and protocols
- Understand the legal implications of a non-licensed provider possessing and administering medications.
- Understand the function of written medical protocols and guidance from a medical advisor.
- Medication Administration
 - Understand the legal aspects of medication administration by laypeople in a remote context.
 - Understand the concepts of right drug, reason, route, dose, and patient.
 - A WFR should not be making decisions on whether a patient should or should not take their personal prescription medications (unless it's an obvious situation of abuse or harm). A WFR may assist trip participants in the administration of prescription medications and may offer OTC medications for adults to make their own decision according to the package label.
 - The possession and administration of epinephrine by laypeople is a complex issue. Support for laypeople using epinephrine for anaphylaxis amongst jurisdictions, including from country to country, varies considerably. It is important to encourage students to become familiar with any specific regulations in this regard and to know implications. Organizations should be strongly encouraged to seek advice from a lawyer and/or guidance from a person acting as a medical advisor before deciding to initiate a policy that includes the emergency use of injectable epinephrine

Draft - Minimum Guidelines and Scope of Practice for Wilderness First Responder (WFR)

Elective Topics

Electives are skills and knowledge within the WFR Scope of practice, that can be included or excluded at the discretion of the provider to meet specific needs of the student and the context in which they will use their WFR

SAR Fundamentals

- Understand fundamental concepts of search and rescue, ICS, and evacuation plans

SCUBA Diving Injury

- Know the physiology of SCUBA and breathing a gas under pressure.
- Know how and why pulmonary over pressure problems and decompression sickness occur
- Recognize the common signs and symptoms including joint pain, paresthesias, limb or facial weakness or any evidence of critical system problems following SCUBA diving
- Initiate treat to include:
 - Stabilization of critical system problems
 - Provide supplement high flow oxygen when available
 - Contact DAN if possible (Divers Alert Network: 919-684-9111)
- Decide on the need and urgency of evacuation:

Mental Health

- Recognize a possible mental health issue.
- Perform a complete patient assessment to rule out/ not miss physical causes
- Decide on need and urgency of evacuation. High risk problems include inability to manage the mental health problem in the field and if the patient appears to be a danger to self or others.

Toxins: Marine

- Initiate appropriate treatment
 - Treat Nematocysts (jelly fish, corals, anemones)
 - Saltwater rinse to remove loose nematocysts, soak in alcohol or vinegar (first test a small area of the sting for adverse effects), scrape off remaining nematocysts.
 - Treat Marine Spine Injury:
 - Soak in hot water until pain relieved or 30-90 minutes, standard wound care.
 - Evac to supportive care
 - If pain persists, the rash worsens, a feeling of overall illness develops, a red streak develops between swollen lymph nodes and the sting, or if either area becomes red, warm and tender.