



When to Call an Ambulance Safety Guide

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When to Call an Ambulance Safety Guide

One of the most difficult decisions camp healthcare staff will make is whether to transport an ill or injured camper or staff member by camp vehicle or call an ambulance to transport the patient to the nearest hospital.

Many camps are located in rural areas, where ambulance service is provided by volunteers. Instead of the two to eight minute ambulance response you might expect in an urban area, you might wait 15 minutes or more for an ambulance in

some rural areas. When ambulance availability is delayed, you might be tempted to transport the patient in a camp vehicle. If you are not sure a 911 call is needed, it is best to err on the side of caution and call an ambulance.

This safety guide discusses the triggers for calling an ambulance, EMS transport, types of ambulance crews, and ambulance equipment. It also provides case studies you can use as examples of when to call an ambulance.



Triggers for Calling 911

Before the summer season begins, the camp medical director, camp nurse, and medical (or risk management) committee should discuss triggers for calling 911 for ambulance transport. Of course there will be gray areas that require sound clinical decision-making by the healthcare staff, but there will be many situations that clearly require or clearly don't require ambulance transport. Some indications for calling 911 include:

- Foreign body airway obstruction
- Respiratory or cardiac arrest
- Altered mental status
- Respiratory problems associated with abnormal mental status
- Reduced level of consciousness
- Abnormal vital signs that do not improve with simple treatments
- Positive mechanism for spinal cord injury
- Submersion with loss of consciousness
- Significant blunt or penetrating trauma to the head, neck, or torso
- Fractures proximal to the knees or elbows
- Multiple fractures distal to the knees or elbows



Transport by Camp Vehicle or Ambulance?

When making the decision of whether to call 911 or transport a patient in a camp vehicle, consider these questions:

- What is the diagnosis of the patient's problem?
- What is the likelihood of acute deterioration during transport?
- What patient care and ongoing assessment is needed during transport?
- Does the patient have any actual or potential ABC (loss of airway, inability to breathe, loss of circulation) life threats from the problem?
- Might the patient need basic life support—airway management, rescue breathing, IV fluids, or chest compressions—during transport?
- Can you adequately assess and treat the patient's pain at camp and during transport?

Again, when in doubt, it's best to err on the side of caution and call 911.



EMS Transport

Generally, 911 emergency medical services are provided by a combination of medical first responders and Emergency Medical Service (EMS) transporting agencies. Medical first responders in private vehicles or police officers might be the first to arrive at the scene of a 911 call. A medical first responder is trained to assess and treat ABC life threats, including administration of supplemental oxygen. A medical first responder can also collect patient history information and measure vital signs.

There are two types of ambulance crews: advanced life support (ALS) and basic life support (BLS). Some EMS systems use a tiered response, in which a specially trained 911 dispatcher uses protocols to determine if the patient needs an ALS or BLS ambulance. In systems that do not use a tiered response, only BLS or only ALS service is available.

The type of ambulance service available in North America is highly variable. Before the camp season starts visit your local ambulance service and ask these questions:

- Is the ambulance response an ALS or BLS unit?
- If response is from a BLS unit, can they call for an ALS ambulance response to the scene or an ALS intercept en route to the hospital?
- Will medical first responders also respond to a 911 call at camp?
- Is the ambulance staffed by paid staff, paid-on-call volunteers, or unpaid volunteers?
- Is the ambulance staff at the station or do they respond to the station from home or work before driving the ambulance to the scene of the 911 call?

Ambulance Equipment

Ambulances are staffed with ALS or BLS providers, and the treatments and equipment available in an ambulance depend on the training of the providers. The table below is an overview of the onboard assessment and treatment supplies found on ALS and BLS ambulances.

	BLS Ambulance	ALS Ambulance	Camp Vehicle
High flow oxygen	Yes	Yes	Maybe
Simple airways	Yes	Yes	No
Advanced airways	Maybe, non-visualized	Yes, visualized	No
Portable and mechanical suction unit	Yes	Yes	No
Epinephrine	Yes	Yes	Maybe
Antihistamines	Maybe oral	Yes, oral and IV	Maybe oral
Nebulized Albuterol	Maybe	Yes	No
CPAP	Maybe	Yes	No
IV fluids	Maybe	Yes	No
Intraosseous access	No	Yes	No
IV pain medication	No	Yes	No
Antiemetic medications	No	Yes	No
Anticonvulsants	No	Yes	No
Glucometer	Yes	Yes	No
Dextrose	Oral	Oral and IV	Maybe oral
Activated charcoal	Maybe	Yes	No
Cardiac monitoring	Maybe	Yes	No
Defibrillator	Automatic	Manual and automatic	Maybe automatic
Aspirin and Nitroglycerin	Maybe	Yes	Maybe aspirin
Emergency lights and sirens	Yes	Yes	No
Online medical control by phone or radio	Yes	Yes	No
Secure transport for immobilized patients	Yes	Yes	No

Get to Know Your Local EMS

Ask your local ambulance service to visit camp.

During the visit:

- Tour the ambulance and learn about its supplies.
- Explain the first-aid qualifications of camp staff, as well as the qualifications and experience of the camp nurse.
- Discuss the type of campers served and potential health problems, especially if your camp serves special-needs children.
- Describe the availability of emergency medical supplies at camp, such as pocket mask, oxygen, and AED.
- Review access and egress routes from the main highway to camp buildings and activity areas like the waterfront, dining hall, and health center.
- Discuss responsibilities for specialized patient rescue, such as a lost swimmer or ropes course accident.
- Explore potential helicopter landing sites should a patient need transport to a Level I or II trauma center.
- Review the previous season's EMS transports for appropriateness and improvements.



Case Studies

The following case studies describe injuries and illnesses that are commonly experienced at camp. Each study presents a case description and two different scenarios: what happens when the patient is transported to the hospital by camp vehicle and what happens when camp healthcare staff calls an ambulance. The assumption is made that the camp nurse cannot leave the camp property, so the patient is transported by other camp staff with standard first aid training. The hospital is 20 minutes away from camp.

Curtis: 11 year old male with gradually worsening abdominal pain.



Curtis presented to the health center at 0200 with severe abdominal pain, isolated to his lower right and left quadrant. Curtis is anxious, pale, and whimpering. He is unable to stand upright, has a shuffling gait, and is unable to lie in a comfortable position. He has no significant medical history and is on no medications. His last meal was the same dinner

eaten by 200 other boys. Curtis also complains of nausea. No one else has complained of similar symptoms.

- What can you do to treat his pain and nausea in the camp health center?
- Can this patient wait to visit the hospital until after breakfast, when the camp driver is on duty?

Transport by Camp Vehicle: A few minutes into the ride to the hospital Curtis suddenly vomits. He does not feel any better and thinks he might vomit again. The counselor sitting next to Curtis observes a small amount of blood in the vomit. Curtis is also coughing forcefully because he feels like he is “choking on puke.” The counselors reassure Curtis and tell him to “hang in there.”

Transport by Ambulance: A few minutes into the ride to the hospital Curtis suddenly vomits into an emesis bag given to him by the EMT-Basic riding with him. As the EMT asks Curtis questions, he is also readying the portable suction unit in case it is needed. Since Curtis is still complaining of nausea and thinks he might vomit again, the EMT radios for an ALS intercept. The ALS ambulance will be able to start an IV and administer an antiemetic. Next the EMT radios the hospital to give a patient report. The emergency department prepares a room and pages the on-call pediatrician. Upon arrival Curtis has an IV and is no longer complaining of nausea.

Billy: 13 year old male with an unstable upper extremity injury



Billy is escorted to the camp health center after falling during a spirited game of Capture the Flag. Billy is cradling his lower right arm against his chest. He is crying. His face is flushed and sweaty. You notice obvious deformity proximal to the right wrist. He rates the pain as 8 of 10 and sharp. The pain is unbearable if he is not supporting his arm. Billy has

no significant medical history and takes no medications. He has no other complaints. As you assess and comfort Billy he begins to complain of tingling in his right hand, which is cool and dusky. Because of the way he is cradling his arm you are unable to assess his radial pulse.

- Can you do anything to restore perfusion to his hand?
- Are you trained to realign Billy's angulated arm?
- What can you do to stabilize or splint Billy's arm?
- What are your options for pharmacological pain control?

Transport by Camp Vehicle: A few minutes into the ride to the hospital Billy tells the driver he can no longer move his fingers or feel his hand. Billy's arm is laid on a pillow in his lap, but each application of the brakes or turn of the wheel causes his arm to shift and the pain to shoot up his arm. The shooting pain is making him cry. He is also complaining of being lightheaded and nauseated. Years later Billy will remember this as the worst summer of his life. He never returns to camp.

Transport by Ambulance: A medical first responder is first on the scene. She assesses the impaired circulation and sensation in Billy's arm. With a bit of gentle traction she realigns Billy's lower arm. Billy immediately comments on the return of sensation, warmth, and color to his hand. With your assistance a ProSplint® is applied to Billy's arm. A few minutes later an ALS ambulance crew arrives. They reassess Billy's arm and compliment you both on the splint. In the back of the ambulance the lead paramedic starts an IV and administers a dose of pain medication per a standing order to provide pharmacological pain relief. Billy is sitting in a semi-reclined position with his arm elevated on his chest to reduce swelling. The ride to the hospital is unremarkable. Billy is seen by an orthopedist and returns to camp after taps with a plaster splint. Years later he still cherishes the old and frayed cast that his camp friends and counselors signed.

Courtney: 11 year old female with progressively worsening asthma attack



Courtney's counselor first noticed Courtney's dry cough during morning cabin clean-up. Two hours later at the riding area Courtney has audible expiratory wheezes. The counselor knows that Courtney uses an Albuterol metered dose inhaler and advises Courtney to use her "puffer." Courtney tells the counselor that she forgot her inhaler in the cabin

and would be fine. The counselor is distracted by two other campers and forgets about Courtney's respiratory distress. Thirty minutes later Courtney is observed sitting on a bench, looking very fatigued. The counselor sends a runner to the health center. You are told, "Courtney is hurt in the horseback area." When you arrive with bandaging and splinting supplies Courtney is only speaking one word at a time. She is lethargic and confused about where she is and who she is with. You send another runner to the cabin for Courtney's inhaler.

- At this point, will Courtney be able to self-administer her metered dose inhaler?
- What are your options for treating Courtney's asthma attack at the horseback riding area or camp health center?
- Does Courtney need transport to the nearest hospital?
- If you are able to administer nebulized Albuterol in the health center, would your decision to transport change?

Transport by Camp Vehicle: Courtney's situation is dire. She is now unconscious. She is carried to the camp director's car and the office calls 911, telling the ambulance to look for a green station wagon on Highway M. An intercept is successfully made with the ambulance 10 minutes later. Courtney is not breathing. The time of respiratory arrest is not known. No ventilations or oxygen was administered in the station wagon—the camp director was driving.

Transport by Ambulance: Courtney's situation is dire. She is now unconscious and her respirations are labored, shallow, and irregular. You deliver bag valve mask ventilations with the help of the counselor. The 911 dispatcher sends a fire engine with EMT-Basics and an ALS ambulance. The EMTs take over ventilations and attach high-flow oxygen to the bag. The paramedics start an IV, administer an inline continuous Albuterol nebulizer, and administer epinephrine. They also prepare endotracheal intubation equipment should Courtney deteriorate even further. Courtney is quickly moved into the patient care compartment with two paramedics and one EMT-Basic. During transport she is given corticosteroids. Courtney spends the night at the hospital and returns to camp the next day.

Marti: 19 year old female thrown from horse



Marti, the horseback program riding director, is thrown off her horse at the start of a trail ride. Horrified campers report that Marti is motionless on the ground for at least 30 seconds after landing head first. A runner is sent to the health center. When you arrive Marti is sitting upright, complaining of a bad headache (7 of 10), and has no other

complaints. Marti remembers being thrown from the horse, but not hitting the ground. She does not remember how she got to her current position. Marti has experienced a traumatic brain injury.

- Does Marti have a mechanism for spinal cord injury?
- If Marti's condition worsened what other symptoms would you observe?
- Is it best to transport Marti to the nearest hospital or monitor her in the camp health center for 12 to 24 hours?

Transport by Camp Vehicle: Marti is able to walk from the trail to the parking lot. She continues to complain of a headache and nausea. During the ride to the hospital and much to the annoyance of the camp driver, Marti continually asks if they are going to the store to get feed for the horses.

Transport by Ambulance: Marti's cervical spine is held with hands-on stabilization at the scene of the fall until medical first responders arrive. Because of the mechanism the possibility exists for a spinal cord injury. The medical first responders assess Marti for other injuries and collect patient history information from the camp nurse. EMT-Basics stabilize Marti on a spine board and transport her to the nearest hospital. During transport the EMT-Basic in the patient care compartment notifies the emergency department of Marti's symptoms of headache, nausea, and amnesia. Upon arrival Marti is taken directly to the CT scanner to look for brain swelling and bleeding. She has none and returns to camp a few hours later with orders for rest and monitoring.

Alan: 13 year old male with foot injury



Alan is helping his cabin mates build a campfire ring when he drops a cantaloupe-sized rock on his foot. He is wearing open-toed sandals. The counselor describes Alan's toe as looking like a smashed grapefruit. The counselor thinks Alan might be in shock. Alan is pale and looks very anxious. Alan tells you he cannot move his great toe and

that it feels numb.

- Does Alan have a mechanism of injury for shock—hypoperfusion?

Transport by Camp Vehicle: When Alan looks at his toe he turns pale and complains of nausea. Before loading him into the camp van you control the bleeding, wrap his injury in gauze, and give him an ice pack. You instruct Alan to keep his foot elevated during the ride to the hospital. During the ride the counselor successfully distracts Alan from his injury with songs and stories.

Transport by Ambulance: Not required in this situation.

Summary

In the first four case studies, the patients presented with problems that deserved additional assessment and treatment at a hospital. In the last case study, the camp transport and treatment was nearly identical to what the patient would have received in an ambulance.

Camp healthcare staff are the first responders to many injuries and illnesses at camp, many of which are easily assessed and definitively treated at camp. There are times, however, when additional assessment and treatment at a hospital is required.

One of the toughest decisions you will make as a camp nurse is summoning an ambulance. If you are uncertain, it is best to err on the side of caution. Once the EMTs or paramedics arrive on the scene you can discuss the benefits of ambulance transport versus private vehicle transport.





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