

Does Your Pre-Season Medical Plan Fit the Situation You are Currently Facing?

*[*To protect the privacy of the people involved in this incident, all names, including crew names, are fictional.]*

The Rock Creek* Type 2 IA crew arrived on the Short Fire late in the day on June 19, too late to be assigned to the line. The crew got checked in, got some dinner, then bedded down for the night. The next day, Rock Creek attended the morning briefing and were informed they were assigned to Division “Charlie.”

During the safety message portion of the morning briefing, crews were asked if they had any EMTs. All the EMTs/ Paramedics on the fire identified themselves by raising a hand. It was revealed that there were several EMTs and Paramedics on the Type 2 Crews and engines assigned to the fire.

An estimated 20 municipality EMTs and Paramedics—all with several years of

Is there a way to get federal agency EMTs more experience with patient contacts by participating in an ambulance ride-along program?

experience working in a large metropolitan complex and fully equipped with oxygen and IV fluids—were on the fire. The majority of the Paramedics on the fire were on the Divide Mountain* Type 2 IA crew.



Type 2 IA Crew constructing handline containing a pocket of heat on the Short Fire's edge.

Several of the fire personnel recorded temperatures, under direct sunlight in the “black”, of 115 degrees.

Crews Working in Extreme Temperatures

Besides Rock Creek, the Divide Mountain Type 2 IA Crew was also assigned to Division “Charlie”. The two crews’ assignment was to scout, cold trail, and hot spot the fire’s edge. In areas the crews found heat, they were to construct handline to contain the perimeter. The crews were to leapfrog to cover as much of the Division they could that day, a distance of approximately five miles of fire perimeter to be checked. The terrain in Division “Charlie” consisted of rolling hills with intermittent sections of steeper hills, ranging from 0 to 40 percent slopes.

As Rock Creek worked along the fire’s edge, the temperatures continued to climb and areas with shade was limited. Onsite weather observations, taken by a belt weather kit in the shade, showed a high temperature of 103 degrees and a minimum RH of 17 percent. Several of the fire personnel recorded temperatures, under direct sunlight in the “black”, of 115 degrees.

A False Sense of Recovery

The “Emergen-C” product contains several [vitamins and nutrients](#) and some electrolytes that the body utilizes, but electrolytes are what is lost in sweat.

By mixing Emergen-C with water, these electrolytes are quickly absorbed into the body’s system.

Also, when the Crewmember ate the cookie, the sugars in the cookie provided a short-term spike in energy and blood glucose levels.

In this incident, this process provided what seemed to be relief to the Crewmember—providing a false sense of recovery and electrolyte balance. This relief, however, was only temporary.

Eating and drinking frequently throughout the work shift is recommended to maintain readily available energy (for work) and maintain blood glucose levels (for decision making).

First Sign of Issues: Crewmember has Cramps

At approximately 1400 hours, a Rock Creek Crewmember informed his Crew Boss that he was experiencing some minor cramps. The Crew Boss had the crew shade-up. He then gave the Crewmember experiencing cramps “Emergen-C” packets and told him to mix it with water and drink it. (For more information on Emergen-C, see sidebar on left.) The Crewmember also ate the cookie from his lunch. The Crewmember’s cramps seemed to go away—so the crew went back to work.

At that time, the Crew Boss broke away from the crew to assist in directing helicopter operations on hot spots and flare ups within the Division.

As the day progressed, the two crews were able to complete the assignment for the day. By the end of the shift, they had “tied-in” the line. The crews were directed to return to camp for dinner and bed down for the night.

Crewmember Continues Having Heat-Related Problems

By 2000 hours, as Rock Creek was driving back to camp, the Crewmember who had previously had cramps told the Crew Boss he was “overheating.”

The Crew Boss turned the vehicle’s air conditioner on in an attempt to cool down the Crewmember as they traveled to camp. At 2030 hours, when Rock Creek arrived back in camp, the crewmember told the

Crew Boss he was cramping and needed help out of the truck.

When the crew assisted the Crewmember out of the truck, he was not able to stand on his own. They laid him down on the ground. The Crew Boss then started looking for the Operations Section Chief (Ops) but was not able to locate him. He also called Division “Charlie” on the radio and informed him of a Crewmember having heat-related problems.

Not being able to locate Ops in camp, the Rock Creek Crew Boss located the Divide Mountain Crew Boss, informed him of his Crewmember’s cramps and overheating issues, and requested help from the Divide Mountain Paramedics.

At approximately 2050 hours, while the Rock Creek Crew Boss was attempting to locate Ops, the Crewmember became unresponsive and had a seizure that lasted approximately 30 seconds.

Incident Within an Incident

The Divide Mountain Crew Boss was talking with a local county paid fire department Battalion Chief (BC4) when the Rock Creek Crew Boss asked for help. BC4 was part of the initial response to the fire the day before. His command truck was fully equipped with oxygen and airway kits. BC4 and Divide Mountain drove to the injured Crewmember’s location, about 600 feet across camp.

***The Crewmember
became unresponsive
and had a seizure that lasted
approximately 30 seconds.***

As they arrive, BC4 finds Paramedics from the Divide Mountain Crew were already providing care to the Crewmember. BC4 gives the Paramedics his medical bag and calls Ops on the radio to inform him of the medical incident. Ops asked him to take command of this medical incident.

As Ops received the radio call about the medical incident, he was in a planning meeting with the Incident Commander (ICT3) and both Division Supervisors at the Helibase, located five miles from camp. Once they learned of this medical incident, all the overhead at the meeting instantly left the Helibase and drove to camp.



Life Flight 3. (Photo not from the Short Fire.)

Life Flight Requested

At 2055 hours, these members of the Type 3 Incident Management Team arrive in camp to find a well-organized Incident Within an Incident in progress. The Paramedics had started an IV and had the Crewmember on high flow oxygen. The Helitack Crew assigned to the fire was clearing and organizing a landing zone (LZ) in the middle of camp.

BC4 had already called the County 911 Center and ordered the closest Life Flight to respond and the closest ambulance (two-hour response) to respond. The order for Life Flight 3 and the ground ambulance was placed with the county 911 Center at 2054 hours.

Emergency Radio Frequencies

During the [2014 Rock Ridge Burn Injury](#) Medevac incident the inability to communicate with commercial air ambulance services led to confusion over landing location, call signs, and a delay in patient transport.

Lessons learned during this incident led the Wyoming BLM State Office to coordinate with local, state, and county EMS providers, in addition to the commercial air ambulance providers with in the state, to establish a statewide frequency “VMED28” to be used during wildland fire medevac incidents.

The frequency used during this incident was the local county primary air to ground, “17CAT1”. The reasoning behind using the county frequency was due to the fact BC4, a county representative, had requested Life Flight to respond through the County 911 Center and, thus, naturally used the county procedures and communication protocols.

High Comfort Level with BC4

Division “Charlie” Trainee receives a quick briefing from the Paramedics and BC4 on the situation. “Charlie” Trainee then relays the situation to the rest of the fire overhead. Due to the high comfort level in BC4, the fire overhead stepped back into their support rolls, deferring to the expertise of BC4.

At 2110 hours, ICT3 calls the Interagency Dispatch Center on his satellite phone to update them on the situation and informs what had been ordered through the County 911 Center.

Life Flight 3 Accepts Mission

At 2114 hours, the Life Flight 3 flight crew received a call from the Life Flight Dispatch Center and is informed of the medical incident on the Short Fire.

Life Flight 3 accepted the mission. Within eight minutes, they are off the ground in route. They call BC4 on the county primary air to ground frequency, “17CAT1”, and establish positive communications.

Life Flight 3 informs BC4 they had a 22 minute ETA. BC4 relays up-to-date information on the Crewmember’s condition. He also provides a description of the LZ and location of nearby powerlines.

Life Flight 3 then requested permission to enter the Temporary Flight Restrictions (TFR) of the fire. BC4 provides them this permission. While in route, the flight crew discusses both the Crewmember’s condition and the conditions of their landing area. Life Flight 3 calls BC4 on 17CAT1 and asks for the LZ to be illuminated via truck headlights. To save on ground time, they also inform BC4 that they would like to “hot load” the Crewmember.

LZ Recon Time Cut in Half

As Life Flight 3 approached the LZ, they were able to identify the location of the powerlines on two sides of the LZ and the well-lit "landing pad" area. It was stated by the Flight Medic *"This was the best night LZ we have ever flown into. It was laid out and lit up like an airport."*

Due to their previous Intel and the excellent LZ lay out, Life Flight 3 was able to cut their recon of the LZ in half and landed at 2144 hours.

Once on the ground, the Flight Medic exited the helicopter and walked over to the Crewmember's location. As he arrived, he saw the Paramedics had already started an IV, had high flow oxygen and had properly packaged the Crewmember for flight. At that time, transfer of the Crewmember's care was given to the Flight Medic.

The Crewmember was loaded into the helicopter. At 2200 hours, Life Flight 3 was airborne in route to the closest hospital. While in route to the hospital, a second IV was started. Due to a tail wind, Life Flight 3 was able to return to the hospital in 17 minutes, arriving at 2218 hours.

Get Agency Representative and Family Member to the Hospital

Once the crewmember was loaded into Life Flight 3 and the helicopter was airborne, a plan was put together to get the Rock Creek Crew Boss and the Crewmember's brother to the hospital. BC4, Ops, and the ICT3 discussed the safest and best plan of action to get them to the hospital.

Due to the fact they were not from the area and the late hour, it was determined BC4 would escort them to the highway and meet with the Short Fire Safety Officer, who was at ICP, located 35 miles away from camp. The Safety Officer would then escort them to the hospital.

Knowing it would take several hours for the Crew Boss, brother and Safety Officer to arrive at the hospital, the ICT3 used his satellite phone and called the BLM Duty Officer. The ICT3 updated the Duty Officer on the situation and the plan to get the Crew Boss and brother to the hospital. The ICT3 and Duty Officer discussed the need to have a Hospital Liaison at the hospital once the Crewmember arrives. They agree that the local U.S. Forest Service Forest FMO, who lives a few minutes from the hospital, would be the best person for this important task.

Interagency Cooperation: Seamless and Effective

One would think that having a U.S. Forest Service employee act as a liaison for a BIA "AD" employee injured on a fire that the BLM is financially responsible for would be a difficult process.

However, due to the standardization of forms and procedures by [OWCP](#) across all federal agencies, the interagency cooperation on this medical incident was seamless and effective.

Forest FMO to be the Hospital Liaison

They end the phone call and the Duty Officer calls the Forest FMO and briefs him on the situation. The Forest FMO agrees to be the Hospital Liaison. He puts on his full Forest Service uniform, reviews the local Forest Service procedure and duties as a Hospital Liaison, and gathers all the necessary and correct paperwork, including the [U.S. Department of Labor CA-20 "Attending Physicians Report."](#)

The Forest FMO/ Hospital Liaison arrives at the hospital just as Life Flight 3 was landing. Due to [HIPPA](#) regulations, he was not able to get much information from the hospital staff. But, because he is wearing his official uniform, the hospital staff would discuss paperwork procedures, insurance/Office of Worker's Compensation Program (OWCP) payment processes.

Once the Crewmember's brother arrived at the hospital, he gives the hospital staff permission to relay information about care and condition of the Crewmember to the Forest FMO.

***"This was the best night LZ
we have ever flown into. It was laid out
and lit up like an airport."***

Flight Medic

Admitted to Intensive Care Unit

The Crewmember arrives at the hospital's Emergency Room (ER) awake, but still suffering from a severely altered mental status. He is unable to give coherent answers to the ER staff's questions. Due to the inability to confirm his full identity, the Crewmember is initially listed as "John Doe". When the brother, Crew Boss and the Safety Officer arrived at 0030 hours, the brother was able to positively identify the Crewmember. He also relayed to the ER staff that the Crewmember had been working hard all day, drank plenty of water but no Gatorade, and had only eaten a small portion of his lunch.

The Safety Officer gave the Attending Physician the [Handout for Medical Providers](#). The Physician said they had already tested for Rhabdomyolysis, but would run the test again.

At approximately 0130 hours, the Crewmember was admitted to the hospital's Intensive Care Unit for dehydration and an extreme sodium deficiency. He remained in the hospital for two days. After his sodium and electrolyte levels balanced out, the Crewmember was released from the hospital to light duty.

Rather than return to his crew for additional assignments, it was determined by the Crewmember's home unit FMO, the BLM Duty Officer, and the Forest FMO that the best course of action for the Crewmember was for him to return home for additional recovery time.

LESSONS

- ✓ Drinking water is a key component in preventing heat related illnesses but water is only one of the components. Exertion while exposed to extremes in temperature causes the body to lose electrolytes much faster than normal. These electrolytes must be replaced by drinking water and consuming a well-balanced diet. If the diet consumed does not have a high level of good nutrients and electrolytes, supplemental sources of both, such as electrolyte drinks, may be needed.
- ✓ Heat related illnesses are a cumulative impact illnesses. Caution is needed before putting personnel suffering from these conditions back into arduous positions. Exposing personnel to additional heat could lead to a second and possibly more severe episode. Additional time may be needed for full recovery before returning to full arduous duty.
- ✓ The local Fire Management Program had done outstanding work during the pre-season to establish a list of contact numbers to assist during medical emergencies. But during this incident, the phone numbers for hospitals and Life Flight were difficult to find in the multi-page list/book. Emergency numbers will be adjusted to the top of the first page in order to be found quickly during future emergencies.
- ✓ Before leaving with the patient, EMS personnel need to have: the patient's full legal name, date of birth, and at least one emergency contact number for the receiving hospital. Without this information, a patient with an altered mental status will be listed as "John Doe" until the patient's identity can be confirmed.
- ✓ Lessons learned from the [2014 Rock Ridge Burn Injury](#) Medevac led the Wyoming BLM State Office to enhance the statewide EMS program. This program now has a Medical Program Director under contract and a high level of budget, training, and equipment support. The program has also led the local field offices to foster interagency coordination and cosponsored training events. This coordination allowed for a high level of trust, understanding and knowledge of roles during this medical emergency.

- ✓ On this emergency medical incident, pre-season interagency training and coordination led to a high level of comfort and trust between all agencies involved: federal Fire Managers, County EMS and fire personnel, and the Life Flight Crew. This training also provided: concise communications and a full understanding of what radio frequency was going to be used, the size and layout of the landing zone, and proper lighting procedures for nighttime landing in remote areas. All personnel were also familiar with patient packaging and loading procedures. This allowed the Flight Crew and on-ground EMS personnel to “hot load” the Crewmember—expediting transport time to the hospital.
- ✓ With a large number of experienced EMTs and Paramedics on site who are used to dealing with medical emergencies, Fire Managers deferred to their expertise and let them use their local procedures and protocols when ordering the next level of medical response. With reliable positive communications with the County 911 Dispatch Center, orders for the Life Flight helicopter were facilitated quickly through their well-established channels.
- ✓ During medical emergencies, fire personnel cannot solely rely on air evacuations. Even with Life Flight on the way, personnel onsite kept the ground ambulance in route and planned to meet the ambulance as close to halfway as possible if Life Flight ran into weather or mechanical issues. Ground transport to the hospital would have taken at least four hours.
- ✓ Life Flight helicopters are not exempt from TFRs, but permission to enter the TFR may be granted by the IC of the incident.
- ✓ Upon receiving a resource order for an assignment, make sure you have up-to-date/current medical forms in your kit.
- ✓ When acting as Agency Liaison to the hospital, wearing the full “official” agency uniform helped facilitate the flow of information and completion of required documentation for patient care and possible OWCP claims.
- ✓ Asking the ER staff when its shift change occurred helped facilitate getting the correct Attending Physician to complete the CA-20 before he ended his shift.
- ✓ The [NWCG Supplemental Food and Drink Guidance](#) allows firefighters to have supplemental food, drinks, powdered drink supplements and solid food supplement (Gels) provided by the incident.

“You can’t plan for everything. You have to be flexible with your plans. If things are working well, don’t be ridged about what is written in a plan. Let the experts do what they do.”

Short Fire Overhead

While on an assignment away from your home unit, do you have emergency medical information (full legal name, date of birth, past medical history, list of medications and allergies, emergency contact phone number) for all of your crewmembers?

This RLS Submitted By:

Dale Snyder, with support from the Short Fire Type 3 Incident Management Team and the Wyoming BLM State Office.

Do you have a Rapid Lesson to share?
Click this button:

Share
Your Lessons