

Beaver Creek Fire FLA – Cardiac Arrest

August 13, 2013 Sawtooth National Forest

1

The Story

The Beaver Creek Fire was ignited by lightning Aug. 7 and is burning northwest of Hailey in the Sawtooth National Forest. ICP is located 2 miles north of downtown Hailey, just east of SR 75.

On August 13, 2013 at 0905 the Planning Section Chief witnessed a member of the camp crew constructing a yurt “go down.” Initially he thought the individual tripped as he attempted to get up, but struggled to do so and again collapsed. He reported that after the individual collapsed again he witnessed his “hands begin to Seize and his torso become rigid.”

The Medical Unit Leader Trainee (MEDL(T)) (we’ll call him Ross) was immediately summoned from the medical tent by another member of the camp crew who reported that their crewmember was having a seizure. Ross’s initial assessment revealed a rapid pulse, labored breathing and continued seizing. He monitored the patient, checking pulse and respirations ‘about every 10 seconds.’ The Medical Unit Leader (hurried to retrieve oxygen from the medical tent getting back to the patient in about 3 minutes with oxygen and an EMT from a Maryland crew who was in the medical tent receiving aid for an unrelated injury. Upon arrival, the EMT ‘knew’ the patient was having a cardiac event and stated this.

Ross, still believing this was a seizure, continued to monitor vitals until 0910 when carotid pulse could not be found. He called for the AED and began compressions while the EMT and the MEDL applied a Bag Valve Mask (BVM) with high flowO₂. The MEDL contacted Blaine County Dispatch Emergency Communications while retrieving the AED. At 0914 after 2-3 rounds of compressions a shock was advised and administered.

Compressions resumed and no more shocks were advised.

At 0916 after 2-3 more rounds of compressions the Ross and the EMT were relieved by local EMS (some of whom were already at ICP for a meeting). Local EMS unit administered three more shocks; pulse was regained and at 0928 patient was transported via ambulance to Life Flight and onto Twin Falls. As of time of this writing, the patient is recovering in the hospital. The emergency room physician visited camp a few days later to share that the team’s quick actions and the use of the AED *saved a life*.

Lessons Learned

This is a success story because critical live-saving equipment and actions were readily available and used appropriately; this is obvious. What is less obvious is the resilience the system showed due in part to firefighters that have learned from others that have shared unintended outcomes.

The AED

The clearest example of this learning is the presence of an AED at ICP. Its availability was critical to a successful outcome. The AED was purchased just 3 months prior with the team’s resources per a request from the MEDL who identified a lack of an AED in camp and the likelihood that one would be needed.

Learning Enhances Situational Awareness (SA)

Ross had never before been involved with a cardiac event and therefore didn’t know what one looked like. In addition the information he was originally given indicated a seizure. This combination predisposed him to perceiving the situation as a seizure and

not a cardiac event. Whether it was a cardiac event initially or became one is inconsequential; the lesson is that as evidence began to contradict his initial perception (e.g., the EMT saying this is a cardiac event, skin color, no pulse) he was able to update his situational awareness and ultimately take appropriate actions. The switch that Ross made is just another reminder that every day we go to the fireline we are to some degree informed by our preconceptions and prior experience. Our ability to maintain an accurate and up-to-date SA is critical to our safety and effectiveness.

Imperfect human performance and unforeseen events

Regardless of the amount of preparation there will always be imperfect human performance and unforeseen events that a resilient firefighter or a resilient organization can absorb and react appropriately. Here are three examples from this case.

The “Landline”

The landlines at ICP are hooked up to a satellite communications system and not the local phone grid. This meant that had the MEDL or the communications unit called 911 on the landline they would have been connected to a 911 operator in UT, slowing the response time of local EMS to the incident. This was only identified when the installer mentioned this fact and the MEDL acquired a local dispatch number. That number was not passed onto the communications unit, opening the potential for error had protocol been followed and the communications unit contacted first in the case of an incident within an incident.

ICP location

Initially when the MEDL called the local EMS there was confusion on the location of ICP. This was mitigated only when a member of the local EMS was serendipitously present to correct the misunderstanding ensuring EMS' timely arrival.

Missing Key

When the MEDL went to open the O₂ bottle he noticed it was missing the key that pressurizes the regulator. He improvised, using his Leatherman to open the bottle. The key was later found on the medical unit floor.

These examples are not intended to downplay the accomplishments of those involved, but instead serve as a reminder that imperfect human performance and unforeseen events will always exist. Successful outcomes depend on our ability to identify and recover from them.

Discussion Questions

Do you need an AED at ICP? If yes, where should it be located to be most effective?

How Many AEDs are out on the line? Are they located in places where they can be effectively used?

How does your previous experience affect your SA? How can you establish and maintain accurate and up-to-date SA?

How can you and/or your unit prepare to identify and recover from imperfect human performance and unforeseen events?

Are your emergency medical response plans practiced?

Facilitative
Learning
Analysis

To learn more about this process go to:
<http://wildfirelessons.net/OrgLearning.aspx>