Rapid Lesson Sharing

Event Type: Norovirus Outbreak

Date: May 12-16, 2021

Location: Tussock Fire, Arizona

Responding to a Norovirus Outbreak on the Tussock Fire

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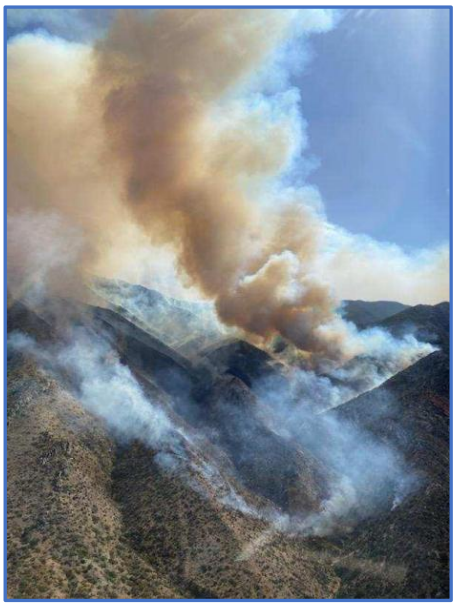

The Tussock Fire. Image courtesy InciWeb.

Medical Incident Summary

Wednesday May 12

1000

Members of Two Crews Feeling Ill with Same Symptoms

At approximately 1000, two members of an Interagency Hotshot Crew reported to their Superintendent that they were feeling sick. They described being nauseated and subsequently experienced bouts of vomiting and explosive diarrhea.

At around the same time, a Type 2 Initial Attack Crew located in the other end of the same Division, staying at the same Spike Camp, reported two members feeling ill with the same signs and symptoms.

Both crews used their internal EMTs and provided hydration, shading, and monitoring of their crew members. Both crew supervisors continued to have their crewmembers monitored, believing perhaps it was something that the crewmembers had eaten after ruling out any dehydration or exertion issues.

Both crews had been doing prep work, including sawing and brushing.

1330-1400

Facilities Unit Leader and Their Trainee also Feeling Ill

That afternoon, the Division Supervisor returned to the Spike Camp where he encountered the Facilities Unit Leader who disclosed he was also feeling sick and was going to take a quick shower. (The Spike Camp is located 53 miles away from the main Incident Command Post, an approximate one-hour and 45-minute drive.)

One half hour later, the Facilities Unit Leader spoke with the Division Supervisor again and identified gastrointestinal issues, vomiting and diarrhea. The Facilities Unit Leader added that his trainee (a member of the Type 2 IA Crew) was also experiencing signs and symptoms of illness.

1500-1640

Branch Director, Division Supervisor, Spike Camp Medical Unit Leader Address These Unfolding Events

The Division Supervisor contacted the Branch Director at approximately 1500 to notify him of the situation.

Around 1600, the Facilities Unit Leader contacted the Spike Camp Medical Unit Leader requesting medical evaluation for him and his trainee. At the same time, the Type 2 IA Crew Superintendent returned to Spike Camp and informed the Division Supervisor that he had two sick crewmembers—and he was feeling sick as well.

At approximately 1630, the Division Supervisor arrived back on the fireline on a UTV and met with the IHC Superintendent. During their conversation, the IHC Superintendent had to excuse himself and subsequently vomited and started to experience gastrointestinal distress.

The conversation with the Division Supervisor identified that there were two crewmembers and the Superintendent who were experiencing signs and symptoms. They were wondering if it could be something they ate. The IHC Superintendent felt like they could continue working.

The Branch Director contacted the Planning Operations Trainee and discussed the events that were unfolding. Next, the Division Supervisor met face-to-face with the Branch Director. The Branch Director informed him that there was a plan to demobilize two crews in the morning. In addition, due to the current situation—including the lack of infrastructure like port-a-toilets, hand washing stations, and fixed facilities; and with the IHC's base 2½ hours away—the Branch Director believed that the IHC could be released to its fire center.

Shortly after these conversations, the paramedic ambulance and Paramedic Team started evaluation of the two support personnel. The Spike Camp Medical Unit Leader contacted the base camp (co-located at ICP) Medical Unit Leader to explain these events as they were unfolding.

1700-1815
COVID Tests Sent to Spike Camp;
IHC to be Demobed

At approximately 1700 in the main fire camp, the Incident Management Team's COVID coordinator (Medical Section Chief) was notified of the events at the Spike Camp and that rapid COVID tests were being sent to the Spike Camp to potentially rule out that disease process as a part of the medical evaluation. He was also updated about the additional illness cases that were being reported.

The Medical Section Chief notified the Safety Officer and Incident Commanders of the developing situation. Medical evaluation and supportive care (intravenous fluids) continued with the initial patients.

The Type 2 IA Superintendent brought his two sick crewmembers to the Spike Camp to be evaluated by medical personnel.

Confirmation occurred between the Branch Director and the Planning Operations Trainee that the IHC was going to be released to its fire center.

At 1815, the Finance Section Chief sent a text message to the IHC Superintendent notifying him the crew would be demobilized and could do so virtually.

Background on the 'Medical Section Chief' Position

Last year, the Southwest Team 1 IMT developed a new "Medical Officer" position created to help the COVID-19 exposure/cases and their associated IWI's. In June 2020, this IMT then published an RLS that explained the benefits of this position. (On this season's Tussock Fire, this position was identified as the "Medical Section Chief".)

Sawtooth Fire COVID 19 Mitigations RLS

Excerpts from this 2020 RLS:

"Several Incident Management Teams have added ad hoc team members to fill novel positions and/or are carrying duplicates of common ICS positions to take on COVID-19 related challenges . . . The common thread between all of these approaches is designating an individual(s) to manage COVID-19 related tasks, thereby allowing other team members to focus on their duties.

Years earlier, the members of the Southwest Area Incident Management Team 3 wrote and presented a white paper outlining the concept of a Medical Officer to the Southwest Coordinating Group. It involved creating a position equal to that of the Safety, Liaison, and Public Information Officer that would focus mainly on the growing complexity of managing medical response to injured or sick individuals on incidents. Until this year, this idea had not gained much traction in the wildland fire community.

This concept has now been modified and utilized to focus on COVID-19 related issues to minimize coronavirus distractions for IMT members performing their normal duties. The Southwest Team 1 IMT selected one of their Operations Sections Chiefs whose day job is involved heavily in EMS response to act in this capacity for 2020 fire season."

1830-1930
More Personnel Showing Signs
and Symptoms of this Illness

By 1830, two members of an additional IHC are experiencing signs and symptoms of this illness. They arrive at the Spike Camp and request medical evaluation. The Spike Camp Medical Unit Leader identified a "bunkhouse" that would be utilized as a clinic to provide evaluation, treatment, and supportive care.

Three additional operational overhead members start to display signs and symptoms and seek medical evaluation as well. In the ICP at 1900 during the planning meeting, the Medical Section Chief referred to the events unfolding at the Spike Camp. After this planning meeting, elements of the Command and General Staff met with ICs, Medical Section Chief, Safety, Operations, and Logistics.

There was a determination to: keep all the lunches in the Spike Camp refrigerator and not utilize them; stop breakfast service from the restaurant that had been utilized that morning; and use only bottled water for consumption. The Logistic Section Chief assured that these actions were taken to prevent further potential disease spread.

The identification of whether it was foodborne, waterborne, bacterial, or a virus truly required the technical expertise of the health department having jurisdiction.

The discussions focus primarily on "sense making"—the IMT's Command and General Staff were trying to understand the scale of issue and what was causing it. Identifying this was outside their traditional knowledge, skills, and abilities. These discussions also included the need for more technical expertise, the care of the affected individuals, and identifying the source of the illness.

At 1930, the Branch Director and the IHC Superintendent have a face-to-face discussion and the IHC departed Spike Camp in route to their fire center, calling the Planning Ops Trainee to assure safe transit and arrival at the fire center.

The Spike Camp Medical Unit Leader employed all available unaffected medical providers, in addition to medical supplies (primarily intravenous supplies).

2000-2300
Patient Count at Spike Camp Increases to 22 Individuals

By 2000 that evening, the Spike Camp Medical Unit Leader recontacted the base camp Medical Unit Leader identifying the need for additional IV bags and intravenous supplies as additional patients were continuing to be identified who were requesting medical evaluation.

The base camp Medical Unit Leader in conjunction with the Medical Section Chief and local fire department staff who are members of the IMT were able to get a case of IV fluids and additional support supplies to prepare for transport to the Spike Camp.

At 2130, the demobed IHC arrived at their fire center. They contacted the Planning Operations Trainee and told him the crew was returning to their homes. The IHC Superintendent explained it seemed that personal infrastructure – private bathrooms with showers and sinks—would help to best support the individuals who were experiencing illness.

Between the hours of 2000 and 2300, the patient count at the Spike Camp increased to 22 individuals. Throughout the evening hours, some of the early onset patients were displaying signs of recovery.

In the base camp at some point through many sidebar conversations, the Medical Section Chief made a clear declaration that this incident really needed technical expertise from the health department. The identification of whether it was foodborne, waterborne, bacterial, or a virus truly required the technical expertise of the health department having jurisdiction.

The discussions focus primarily on sense making, the care of the affected individuals, and identifying the source of the illness.

Thursday May 13

0600-0800

Spike Camp and ICP are Located in Different Counties with Their Own Health Departments

On this morning the base camp Medical Unit Leader left with supplies to support the Spike Camp Medical Unit Leader for the patients in the Spike Camp. At 0700, the Medical Section Chief contacts the health department in the county where the Spike Camp is located, explains this ongoing medical incident, and requests assistance. This county's health department physician departs for Spike Camp.

An hour later, the Plans Chief contacts the county health department for the ICP, which is in a different county than the Spike Camp. The ICP's county health department is larger and provided information and guidance. This county health department also notified the state health department to assist the smaller county health department where the Spike Camp is located.

At the Command and General Staff meeting the decision is made to form an Incident Within an Incident (IWI) Team to support the gastrointestinal outbreak at the Spike Camp. The IWI Team consisted of a complete Command and General staff.

The base camp Medical Unit Leader arrived at the Spike Camp, delivering supplies, and providing administrative support to the Spike Camp Medical Unit Leader.

The decision is made to form an Incident Within an Incident (IWI) Team to support the gastrointestinal outbreak at the Spike Camp.

1230-1430

County Health Physician Believes This is a Norovirus Outbreak

At approximately 1230, the health department physician arrives at the Spike Camp to provide support and technical expertise. The Spike Camp Medical Unit Leader requested that the physician evaluate a patient displaying severe signs and symptoms with collateral underlying medical conditions. The physician evaluated that patient to assure the stabilization and medical treatment were appropriate.

The physician then gathered information as well as biological samples for testing. The physician believed it was probably a norovirus based on symptomology, timelines, and recovery. The physician recommended the IMT remove all the personnel from the Spike Camp, industrially wash all garments, sleeping bags, and soft porous material utilized by the personnel.

The physician also identified the need for all personnel be provided the ability to have good cleansing showers and provide separation to prevent any further spread of illness. The physician recommended no one should go home if there is a potential to spread the illness to others.

The physician finally recommended the sanitization of the work center and the bunkhouse. Short-term isolation and quarantine would prevent any further disease spread.

There were multiple levels of coordination including coordination with Logistics and the Buying Team to provide rooms for approximately 60 people.

At approximately 1430, both Medical Unit Leaders conveyed the physician's assessment and recommended course of action to the Medical Section Chief who conveyed it to the IWI Team. The IWI Team began the implementation of bringing all personnel down from the Spike Camp to hotel rooms in proximity of the ICP.

There were multiple levels of coordination including with Logistics and the Buying Team to provide rooms for approximately 60 people. In an effort meet the county health department physician's recommendations, the movement of information became rapid, as the pressure of a limiting time wedge was experienced by the IWI Team.

During this time one resource stopped by ICP in route to quarantine and another resource stopped by from isolation to pick up supplies—even though the messaging was to not enter the ICP.

The determination was made to support the isolated/quarantined personnel with food from the catering facility at the ICP rather than using per diem—that could potentially expose others to the sick individuals.

Throughout the day, additional individuals displayed signs and symptoms of the illness. They were treated and supported through incident medical personnel. None of the sick individuals required increased medical intervention or transport to a medical facility.

Saturday May 15

By Saturday, a total of 49 personnel have self-reported signs and symptoms of the illness. There was one additional sick person identified as a family member from the first IHC that returned home.

The IWI Team has been engaged with support and follow-up with the individuals. At the recommendation of the health department, isolation/quarantine ended approximately 48 hours since the last symptoms or exposure.

The Logistics Chief coordinated a commercial sanitization of the work center and the bunkhouse at the Spike Camp. There was an apparent miscommunication concerning the bunkhouse and it was not sanitized when the rest of the facility was because it was locked.

Sunday May 16

In the morning it was learned that during the previous day, three to four camp crew members and a driver went into the bunkhouse prior to its sanitization to remove trash and perform miscellaneous cleaning tasks. Even though those individuals were asymptomatic, they were quarantined as a precautionary measure.

Wednesday May 19

As of the writing of this document, there are no new cases of illness and the demobilization of resources after isolation and quarantine are almost complete.

Friday May 21

The Yavapai County Health Department confirms that the illness on the Tussock Fire is norovirus.

What Went Right

- Proactive planning and accurate documentation by the Spike Camp Medical Unit Leader provided a bedrock for successful patient care as well as support from the health department.
- The identification and utilization of local government IMT members to make contact with subject matter experts (health departments) to provide guidance and support medical units and providers providing accurate and timely assessments and treatments including supportive care for patients.
- Local government IMT members assisting in the procurement of medical supplies and support for medical providers.
- The activation of the IWI Team provided successful management and support for all the personnel involved in the Spike Camp gastrointestinal outbreak.

Future Considerations

- Consider alternative scenarios. It is easy to defer that it is simply something we ate. But the consideration of "what if it's something else" may have led to sharing of information a bit earlier in the process.
- Validating and vetting a bias for action through technical expertise in situations that are uncommon for the Incident Management Team. The IMT brings process and communications. One of the basic tenets of ICS is deference to technical expertise.
- Supervisors and IMT overhead communicating illness or abnormal personnel circumstances in a timelier fashion. Having open honest dialogue that communication/notification does not always require action. The sharing of information provides consistent situational awareness at all levels of the organization.
- The early engagement of Command and General Staff positions bring specific and valuable knowledge, skills, and abilities to provide a holistic support of the incident and the employees.
- Consider plans for movement and contingents to support human needs (vomiting and diarrhea) in transit and allow discretionary time.

This RLS was submitted by:

Stu Rodeffer
on behalf of the
Southwest Incident
Management Team 2