

Rapid Lesson Sharing

Event Type: Ash Pit Burn Injury

Date: August 23, 2019

Location: Swan Lake Fire
Southcentral Alaska's Kenai Peninsula
near Soldotna

When injuries occur, we assess, stabilize, package, transport and hand-off patients to a higher level of care. But, then what? What (or who) determines the level of care and location of treatment(s)? Can we influence the process, and perhaps the outcome?

Narrative

An IHC saw team working the Swan Lake Fire was cutting hazard trees near a dozer line where another crew would be coming in to mop-up. When the swamper stepped and reached for a chunk of birch tree on the black side of the dozer line, his foot sunk into a hot ash pit, approximately 18 inches deep. As the swamper attempted to extricate himself, the sawyer stepped toward and reached for the swamper to help pull him out.

They both sustained burn injuries to their lower legs caused by the hot ash burning along the edge of the dozer berm, underneath the innocuous looking surface.

Both patients were transported by one of the crew's rental vehicles to the local hospital where they were met by the IMT Medical Unit Leader and treated by a physician. Both burn injuries were partial thickness (2nd Degree) burns and covered an estimated three percent of the respective Total Body Surface Areas (TBSA). One patient's burn was on the back side of the knee joint, while the other's was located between the top of his boot and his knee.

What are the Lessons?

There were many people involved who helped determine next steps and assured the best possible care for these two firefighters: the crew's leadership, the Interagency Resource Representatives (IARR), the IMT's Medical Unit Leader (MEDL), Agency Administrators, as well as the attending physician.

For some involved, there was confusion stemming from different sources of burn injury protocol. Specifically, the 2019 Red Book and a NWCG memorandum on *Standards for Burn Injuries (July 2008)* that contain conflicting criteria about the percentage of Total Body Surface Area that authorizes a visit to a burn center. There was also concern about where patients should go in order to obtain the best possible follow-up treatment and what may or may not be covered by OWCP.



The ash pit where the two firefighters were burned in the dozer berm. Photo taken one week after this burn incident occurred.

Who Decides, Who Influences, and What Policy/Direction is there to Guide Us?

If a crewmember sustains a burn injury, do you have all the information you need to ensure the best possible care is provided?

The most important and time-critical consideration is getting patients to the appropriate level of care in a timely manner. For this, we (firefighters) are well prepared. Aren't we?

We know how to manage an Incident Within an Incident (IWI). We practice it with simulations and have a plan in place when on fires. We have line medics and/or REM teams staged close to where we work, and we mitigate hazards to the best of our ability.

When injuries occur, we assess, stabilize, package, transport and hand-off patients to a higher level of care. But, then what? What (or who) determines the level of care and location of treatment(s)? Can we influence the process, and perhaps the outcome?

Takeaways

✓ **Be Familiar with Red Book Criteria and Protocols**

The Red Book (*Interagency Standards for Fire and Fire Aviation Operations 2019*) is the standard to be used when any firefighter sustains burn injuries, regardless of agency jurisdiction. Be familiar with Chapter 7 (pgs. 177-179)

Required Treatment for Burn Injuries:

<https://www.nifc.gov/PUBLICATIONS/redbook/2019/RedBookAll.pdf>

There are important criteria and protocols in this section that are intended to guide the trajectory of patient care. Also, on page 4 of this RLS, see the (draft) *Burn Injury Evaluation and Response Process* flow chart, which has been proposed to be included in the next version of the IRPG. It essentially distills information from the Red Book into a quick, one-page reference sheet.

✓ **Use the MIR and ICS 206 WF**

Use the Medical Incident Report (MIR), also known as the 8-line. Also use the ICS 206 WF as intended by completing it and communicating all information on the form to Dispatch/Incident Communications. This important step, done in a timely manner, sets everything in motion by creating a common operating picture.

Patient care, notifications and reporting procedures all begin with the MIR. Incomplete or delayed information (even if deemed unimportant at the time) creates information gaps that can cause delays or have other unintended downstream effects.



The ash pit where the two firefighters were burned in the dozer berm.
Photo taken one week after this burn incident occurred.

✓ **Be Prepared to Respond to Entire Process—Not Just the Initial Incident**

Be prepared to respond to the entire process (the big picture), not just the initial incident. Getting patients to a higher level of care is step one. Medical documentation, OWCP claims, hospital liaison support, follow-up physician/specialist consultations, rehabilitation, peer support/CISM, etc., are all actions that should be considered and planned for before they are needed.

Important Considerations from the Red Book

- ✓ The decision to refer a firefighter not meeting the burn injury criteria (outlined in the Red Book on page 178, see: *ABA Burn Injury Criteria*) to a regional burn center is made directly by the attending physician or may be requested of the physician by the Agency Administrator or designee having jurisdiction and/or firefighter representative after discussing medical follow-up beyond the ER. A possible solution is a referral to a burn center out-patient clinic for follow-up care after the ER visit.
- ✓ After initial medical stabilization and evaluation are completed in a medical facility, the decision to refer the employee to a specialty care physician/facility is made only by the attending physician. Workers Compensation benefits may be denied in the event the employee is transported to a specialty care physician/facility without a referral from the attending physician after already being seen by a medical provider. In addition, a report prepared by a Physician's Assistant must be countersigned by a physician to be accepted as medical evidence (Red Book, page 177).

Follow-Up Resources:

[Southcentral Alaska Ash Pit Burn Injuries \(2019\)](#)

[2019 Red Book](#)

[American Burn Association \(ABA\)](#)

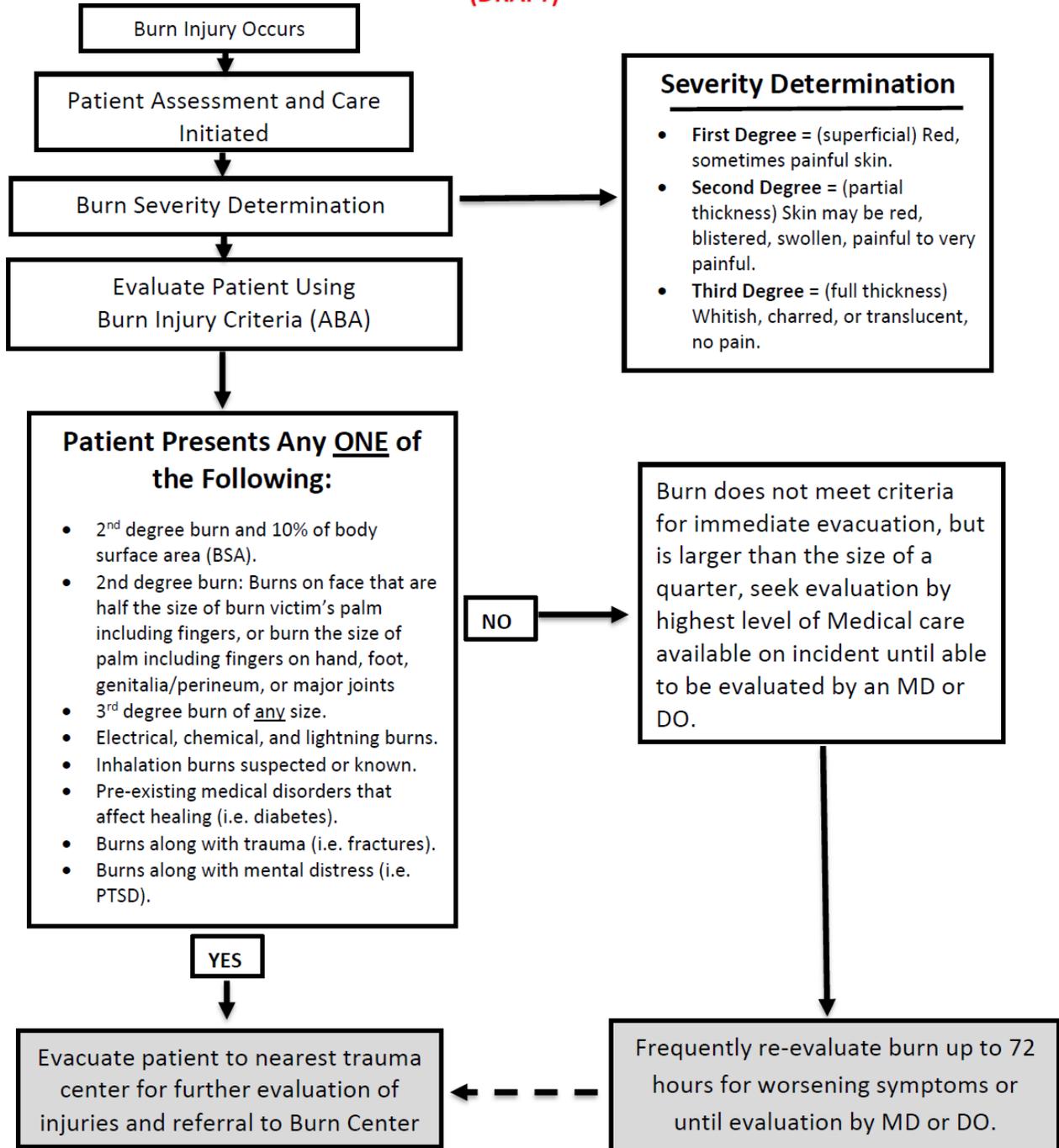


This photo, of the opposite (green) side of the dozer line from where the ash pit burn injuries occurred, shows the representative fuels.

Burn Injury Evaluation & Response Process For the Fireline EMR or EMT-B

Source: NIFC.gov/publications/redbook/2019/chapter07.pdf

(DRAFT)



This document is for the responding EMR or EMT-Basic in the event of a burn injury on a fire in the absence of higher level medical direction.

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