



The White Paper

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Team TWP

Editor-In-Chief

Mark Bandy
mark@emswhitepaper.com

Contributing Editors

Bryan Bledsoe, D.O.
Tom Bouthillet
Chris Cebollero

Writers

Andrea Cooper, M.A.
Jessica Diaz-Nagel, M.D.
Michael Herbert, B.S., NRP
Alberto Molano, M.D, Ph.D.
Shayoni Ray, Ph.D.
Christianna Reedy, M.S.
Kristen Ryan, M.B.S.
Brandi Talkington, Ph.D.

Peer Reviewers

David Glendenning, Michael Herbert, Andrew Slaff, Joshua Rosen,
Brian Behn, Vince DiGullio, Dan Greenhaus

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THE BLACK ROCK CITY EMERGENCY SERVICES DEPARTMENT: PROVIDING EMERGENCY CARE IN A UNIQUE ENVIRONMENT ANDREA COOPER

Population of Black Rock City, Nevada, as of April 2017: 0

Estimated population of Black Rock City, Nevada, on August 31, 2017: 70,000

Black Rock City, Nevada, is a temporary city that exists for only one week per year. It's the home of the annual Burning Man event, "a temporary metropolis dedicated to community, art, self-expression, and self-reliance" (www.burningman.org/event)

For most attendees, Burning Man is a fun – though challenging – one-week adventure: a combination of mind-blowing art event and "extreme" camping trip. Think daily highs that regularly exceed 100° F (40° C) and overnight lows that can drop into the 40s (5-10° C). Throw in occasional "white outs" caused by dust storms, and rain storms that turn "the playa" – the dry lake bed on which the event takes place – into a field of mud. Then consider that there are no supply vendors at the event, so "Burners" have to bring in everything they need –water, food, and shelter – to survive in the harsh, arid Black Rock Desert environment.

Obviously, simply attending the event requires careful planning. For the team charged with protecting the health and safety of attendees, that challenge is multiplied exponentially. How do you go about standing up emergency services for 70,000 people in a remote location two hours from the nearest airport (Reno,

Nevada) and more than 10 miles from the nearest village (Gerlach, Nevada)?

EMS White Paper spoke with Kate Gonnella, Chief of Emergency Services, about the enormous effort involved in maintaining public health and safety at Burning Man.

The Volunteer Emergency Services Team

Kate leads an Emergency Services department that numbers approximately 1400 volunteers, about 650 to 680 of whom attend the event in any one year. (In 2016, there were 677 ESD team members on the playa.) Most are trained, licensed professionals. What's more, all must have at least one "burn" under their belt.

Kate explains why first-year "Burners" are not admitted to the team: "When you go to Burning Man, people can tell you about it all they want, but there is nothing like being there in that heat, with that dust, having to manage all of your things – your food and your water – getting sleep-deprived because the theme camp next door is so loud that you never really get a great night's sleep...

"Not everybody is cut out for that. What we've found is that, if we bring a first-year person on, somebody who's never been to the event before, it's sometimes just too much. It isn't what they were expecting. They get a day or two into it, and they say,

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'I'm going home. What I read about Burning Man, it was way more glamorous than this. I'm tired of having dust in every crevice. I'm tired of being thirsty and tired...'"

Qualified volunteers who have who survived at least one year of Burning Man attendance are organized into the following emergency teams:

- The Medical team includes licensed providers such as doctors, nurses, EMTs and paramedics, physician's assistants, and nurse practitioners. Team members serve at six medical stations strategically located throughout the playa, equipped with cots and basic medical supplies. They also provide First Responder care in the field.
- The Fire team operates two Type 6 engines with 300 gallons of water and a three to four person crew. They put out car fires, trailer fires, and provide technical rescue. They also have a Hazardous Materials and Rescue response rig with a four-person team. Because art "burns" large and small are an integral part of the Burning Man experience, the Fire and Medical branches provides Rapid Intervention Teams (RITs) that secure the perimeter of burns and stand by in case any intervention or rescue is needed.
- The hand-picked Crisis Intervention Team provides mental health services. They deal with, in Kate's words, "somebody who's having a melt down." They also provide expert support for domestic violence and sexual assault incidents, though rare. The team includes psychiatrists, psychologists and therapists, all with a significant amount of crisis intervention experience.
- The Communications team consists of dispatchers and IT personnel.
- The Logistics team manages pre- and post-event set-up of emergency facilities, EDS-related recycling and trash management

during event, and delivery of meals to medical stations for on-duty personnel.

- The Planning department handles ESD volunteer check-ins, issues laminates, and generates daily SitStat (Situation Status) reports.

Kate points out that because there isn't a lot of time to provide training on the playa, much of the preparation takes place off-playa via their volunteer website and blog, where volunteers can find online orientations and, in some cases, take tests. Once volunteers arrive at the playa and show up for their first shift, they receive additional orientation and are given the opportunity to ask questions.



Pictured Above: The Emergency Services Team preparing for a controlled burn on the playa

"The bottom line," says Kate, "is that when you are a professional, when you're doing medical or fire or crisis intervention, there's an element of cookie cutter-ness to it. They're taking what they already know and do so well, and they're applying it to a different environment. We don't have to teach them all of that. We have to teach them things like, 'Tape isn't going to work as well as coban when you're wrapping up a wound because tape will just turn into a hot mess, whereas coban will stay on.' We take the things they already know and we give them information to help them

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do it in this really different environment that's so austere and challenging."

When asked what makes a successful ESD volunteer, Kate replies, "Honestly, people that are firefighters and care providers already have what it takes; they wouldn't be in their profession if they didn't. We trust that. We do prefer staffing our field units with people that work in the field, like paramedics or EMTs. We try to put people with an emergency background into the clinic because they're more attuned to the immediacy of the event, and tend to be more resilient in a harried environment. For instance, an ER doctor or nurse who's worked in Rwanda or done remote work in Guatemalan villages is going to be a better fit than, say, a urologist."



Pictured Left:
One of six on-
site medical
tents.

Additional Vendor Support

The Burning Man organization supplements its emergency staff by contracting with two outside vendors. Unlike ESD team members, vendor personnel are paid for their services.

- The contracted Medical Services vendor runs a State-certified onsite Emergency Care Center called Rampart. The clinic is erected the week before the event. Its staff of about 150 offers a full range of medications, hydration, suturing, and casting for simple fractures. (Attendees with complex fractures are sent to the hospital in Reno to see an orthopedist.) In 2012, the clinic added radiology and diagnostics capabilities, including i-STAT laboratory studies. The medical services vendor also provides a fleet of 10 ambulances and one air ambulance to transport patients to Reno if needed.
- The contracted Fire Support vendor, Lightning Suppression, brings a crew of about 50 firefighters, five Type 2 tenders, one Type 1 engine and one Type 6 engine with a total of about 55,000 gallons of fire fighting water capacity onto the playa.

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An ICS-based Model

Because Burning Man takes place on public land in Pershing County, in addition to coordinating with other Burning Man teams and the contracted vendors, the ESD team works closely with the Nevada office of the U.S. Bureau of Land Management (BLM), the Pershing County Sheriff's Office, the Nevada Department of Health, and Nevada EMS.

The organizations all work together using an Incident Command System (ICS) model. Kate explains that the Burning Man organizers, ESD teams and the government agencies usually meet a couple of times before the event. Together, they work through an ICS tabletop exercise to clarify roles and responsibilities and to identify additional mitigation and preparedness needs. "We'll run a scenario," Kate explained. "Last year it was an airplane crash on the playa. Our people that are running the tabletop will put together a timeline: Whom would you deploy next? Who would get involved now? We talk through what we would do, as a group, to make sure we're all on the same page about how we would manage a large-scale incident."

The ESD and vendor teams meet every morning at 9:30 when they're out on the playa "to talk about the operations from the day before and what are our anticipated hot spots will be for the day coming up." Each afternoon, Emergency Services, BLM, Pershing County sheriffs, key Burning Man stakeholders, and the managers of various Burning Man teams get together to collaboratively review any incidents that took place the day before and discuss whether they were managed correctly and what they would do differently next time. Then, on the very last day of the event, the entire team meets to review the event while it's still fresh in their minds.

A Balancing Act

When asked about the biggest challenge of providing emergency care at Burning Man, Kate

replies, "Some of our people get frustrated because they want to be able to give more, but you can only provide so much up there. For instance, two years ago, the medical vendor wanted to bring a CT scan machine up there. We really had to think about that. Certainly, it would diagnose that random stroke that might happen, or an abdominal aneurysm or something like that, but is that the best use of our time, energy, and money, or are there other ways we can enhance what we do? One of the things we have committed to is making sure we can get people rapidly down to Reno if we need to so that we don't feel like we have to have all of those services up on the playa.

"As you can imagine," she summarizes, "it's a real balancing act trying to figure out just the right amount to do... to try to hit that sweet spot."

Not What You'd Expect

So, what types of emergencies does the ESD team commonly deal with? You may be surprised by the answer. "There's a misconception that Burning Man is just this big drug fest," says Kate, "but it's really more of an art fest. Certainly there are people that come to the event with the intention of getting high, but that's not your average person." The average person, she observes, wants to participate in the Burning Man experiment in community, to be part of something that's "profound and different." In fact, drug- and alcohol-related incidents make up less than one percent of total emergency events.

Surprisingly, dehydration is another condition that comprises less than 10 percent of incidents.

"Most of the things we see," notes Kate, "are injuries. We see a lot of cuts and twists, things like that. It's the accidents that really get us. People are there taking great care of themselves, but then they smash their finger with a hammer or fall off a ladder or something like that, and they end up coming to see us."

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Every year, something happens on the playa to generate a rash of injuries – sometimes literally. Kate recalls a piece of art called The Wedge – essentially, a huge wedge-shaped slide covered with astroturf. There were no safety railings on the sides, nor was there anything to sit on while sliding.

"What ended up happening when the event opened and people started going up on this thing," Kate recollects, "is that we were spending all of our time at our stations dealing with butt rash and falls. We had to go over there and ask them to add some railings so that people wouldn't fall, and to bring cardboard up there – do something to stop people from hurting their butts, because we had so much road rash that it was overwhelming our medical department.

"Every year it's something. We all laugh about it, but it needs to be mitigated."

2016 Incident Summary

4383 patients seen at ESD first-aid stations
494 ambulance calls for service
1894 patients seen at the Rampart clinic
33 patients transported off-playa

Soft tissue injuries were the most common complaint (969), followed by eyes, ears, nose, throat (680) and lacerations (579).

There were 71 alcohol and drug related complaints, affecting about 0.01% of the population.



Pictured Above: Eyewash Station



Andrea Cooper is a writer, editor, and consumer engagement pro with experience in industries including health care, finance, education, and worker safety, for companies ranging from dotcom startups to leading US and international corporations.

Thoughts?

Comments?

We would like to hear from you!

mark@emswhitepaper.com

Stay tuned for our next issue:

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