

LIGHTNING DATA CENTER MINUTES
June 12, 2015
ST. ANTHONY HOSPITAL WEST, LAKEWOOD, CO

Monthly Quote: "Television news is like a lightning flash. It makes a loud noise, lights up everything around it, leaves everything else in darkness and then is suddenly gone."
-William Hodding Carter, Jr.

1. Meeting began at noon and adjourned at 12:58 PM: Members Present: Claus, Collier, Cui-Gift, Elder, Gift, Langford, Nibbe, Swanson, Wells and Yarnell. Langford moderated.
2. The meeting began with a brief recap & debrief of the May LDC meeting which covered Lightning and EMS/EMTs. We discussed the limitations of including a group of people by phone conference when holding the regular meeting.
3. Carl Swanson brought up an incident in Greeley Colorado where oil storage tanks were set on fire by lightning (see links below). Carl wondered if injuries primary to the fire would be considered lightning injury. General opinion was that no, injuries caused by the fire would not be considered lightning injuries even if lightning caused the fire.
4. Robert Gift said he heard that someone was injured by lightning at Red Rocks, the outdoor music amphitheater on the west side of Denver. No evidence of this was found on the internet, but there was an incident where the venue was evacuated on 5/27/15. An article cited below says Red Rocks is required to "go on lightning delay" if lightning is within two miles. The capacity of the venue is 9,450.
5. A neighbor of Ken Langford was at another evacuated Red Rocks concert on 6/5/15, and said there was ankle deep water rushing through the venue during the evacuation with lightning striking very close by. There is a link to dramatic video of this incident in the links section of these minutes.
6. Carl Swanson related a video which shows lightning striking a concrete bridge abutment in Mississippi (link below). Carl wondered if this might be a good clip to illustrate that lightning does not always strike the tallest object. The video also shows some nice "beading" as the channel dissipates.
7. Phil Yarnell reported he saw an interview with the family of Tim Samaras last week. May 31st marked the 2nd anniversary of the deaths of he and his chase partners while storm chasing in Texas. There is a link below to the clip Phil probably saw. Tim Samaras presented to the Lightning Data Center on the topic of his high speed lightning photography in November of 2007. His research talents and contributions to community are missed.
8. Carl Swanson gave an update on the summer 2015 project to gather lightning injury data from local fire & EMS organizations. Carl says some who initially

declined to participate have since joined the project after recently being called to respond to an incident.

9. Ken Langford proposed a new initiative for the LDC whereby a media report containing lightning safety messages would be transcribed and discussed for accuracy and effectiveness. Ken then presented the first such opportunity: a media clip from KUSA-TV Channel 9 in Denver which was originally broadcast on August 30, 2014. Members are encouraged to scroll to the end of this document and review the transcript. You may then review the comments our attending members made, and if you would like to add comments please email them to the address for Steve Clark shown below in section 14.
10. Two other media incidents were discussed for possible later critique: a local Denver weather person who presents in an outdoor location even as lightning and thunder rage close to her location; and a national meteorologist who does a happy dance for the camera when lightning flashes overhead during winter storms, even though he is located in an outdoor location. We encourage members to comment on whether these and the presented initiative hold any interest for our membership.
11. Phil Yarnell reported that the lawsuit stemming from the Utah lightning fatality on 7/13/11 involving the Boy Scouts of America has been settled. An out-of-court confidential settlement was reached in April to resolve the September 2012 lawsuit. Phil and Mary Ann Cooper were called upon to contribute expertise to the lawsuit.
12. Phil brought up the topic of indoor pools and lightning safety. Carl reported that he knows of one pool that evacuates and another that does not. Further research has not found any lightning fatality involving an indoor pool. Does any member know of such an incident? Please see related links below.
13. In preparing these minutes I was ready to remind you all about Lightning Safety Awareness Week. As I went looking for verification on the exact dates I realized that this is not a national initiative, as I had previously assumed. I discovered that there is a patchwork of designations on a state by state basis covering weather preparedness. On one hand this makes sense, based on local weather hazards. On the other hand, someone who travels might benefit from safety messages that pertain to regional or even foreign hazards.

Here is what I did find: a calendar with details on Weather Preparedness Events can be found here:

<http://www.nws.noaa.gov/om/severeweather/severewxcal.shtml>

Much to my surprise, many states do not have a specific lightning event. In fact only 27 states feature lightning specific events. Additionally, the programs are named differently by state. The following is a list of event names utilized and the

states that specifically mention lightning:

13 of 27 call their event "Lightning Safety Awareness Week" - California, Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, South Dakota, Tennessee, Texas, Utah, West Virginia & Pennsylvania.

7 of 27 call their event "Lightning Awareness Week" - Delaware, Georgia, Illinois, Indiana, Iowa, Kansas, New Jersey.

2 of 27 call their event "Lightning Safety Week" - Idaho, Oklahoma.

1 of 27 calls their event "Lightning Safety Preparedness Week" – Colorado.

1 of 27 calls their event "Severe and Lightning Weather Awareness Week" - South Carolina.

1 of 27 calls their event "Lightning Awareness Day" - Wisconsin (6/23/15).

1 of 27 calls their event "Summer Weather Safety Week, Heat and Lightning" – Missouri.

1 of 27 calls their event "Summer Weather Safety" (lightning, Heat, Rip Currents)" – Alabama.

A total of 43 states host programs on “severe weather,” and no doubt lightning is included in these. This is mostly called "Severe Weather Awareness Week" (in 23 states). The only states which have neither Severe Weather nor Lightning events are Alaska, Arizona, Hawaii, and Virginia. Virginia does have a Tornado Awareness Day and Drill. Arizona has Heat, Monsoon and Wildfire Awareness events. Lightning is covered as a section of Monsoon Awareness. Hawaii probably sees the least of all lightning, but I personally have seen plenty of lightning in the interior of Alaska in the summer.

14. Questions, comments, notification of errors, and critiques of these minutes are welcome. Please forward those to Steve Clark at: sclarktoto@gmail.com. Please keep your communications professional and respectful. Communications will be forwarded to the appropriate author(s) of the minutes and addressed accordingly.

15. LDC Disclaimer: These minutes do not represent official positions of the LDC or its members. They simply reflect the comments made at the meeting. Furthermore, the LDC does not implicitly or explicitly recommend or endorse any product or service. Any service or product presented in these minutes is done so for purposes of discussion and analysis. The merit (or lack thereof) is open for the consideration and review by the entire membership.

16. Next meeting: Friday, July 10, 2015 at 11:45 AM at St. Anthony Hospital West. Conference Room TBA.

Respectfully Submitted,

Ken Langford, Photographer, Mr. Random Enterprises, Inc.

Lightning Links

This is a monthly listing of periodicals, websites, and videos about lightning and allied areas from a variety of sources. A headline or description is listed, followed by the link. Please note that some of the links are perishable, which means you'll need to go to the source for the information.

http://dutchsinse.com, 2015: 4/17/2015 — Fracking well in Greeley Colorado EXPLODES — Officials blame lightning?!

Link: <http://dutchsinse.com/4172015-fracking-well-in-greeley-colorado-explodes/>

KUSA-TV, 2015: Lightning strike sparks oil tank fire near Greeley. 4/17/15:

Link: <http://www.9news.com/story/news/local/2015/04/17/possible-lightning-strike-sparks-oil-tank-fire/25950779/>

Google Web Cache, 2015: Storm brings lightning, heavy rain across Denver area, May 28, 2015. Includes Red Rocks Evacuation story. Link:

<http://webcache.googleusercontent.com/search?q=cache:amrkOjMMw68J:www.9news.com/story/weather/2015/05/28/storm-brings-heavy-rain-dangerous-lightning/28053709/+&cd=10&hl=en&ct=clnk&gl=us>

YouTube, 2015: Police Dash Cam Lightning Strike: Lightning Bolt Nearly Hits Gautier Officer's Patrol Car. May 29, 2015.

Link: <https://www.youtube.com/watch?v=vaUEw3w0hM0>

Payne, D., 2014: Remembering Tim Samaras - Exclusive Interview with Wife Kathy, July 24, 2014. Link: https://www.youtube.com/watch?v=JIGW_dhtTs0

Elderly Gentleman on a Sportbike, 2015: Lettuce with Lightning and DJ Jazzy Jeff at Red Rocks Colorado June 5 2015. **Watch This One!** Link:

https://www.youtube.com/watch?v=w1_hDXFIW24

Concerning Indoor Swimming Pools – Conflicting opinions:

www.lightningsafety.com/nlsi_pls/indoor_pools.html

<http://www.aquaticsintl.com/safety/when-lightning-strikes.aspx>

Proposed Initiative: Lightning Safety Messages in the Media

Members of the LDC are invited to submit examples of media coverage of Lightning Safety messages for review and critique. Each message should be transcribed and linked so that members can review the source media. We will critique the message in the open meeting and publish the results with the minutes. We also invite satellite members of the LDC to submit comments, and these will be moderated and posted, in the next minutes, and hopefully on the LDC website.

At this meeting Ken Langford showed a clip from KUSA channel 9 in Denver entitled "What first responders should do after lightning strikes." It was broadcast on August 30, 2014. Here is the link to the media clip:

<http://www.9news.com/story/news/local/2014/08/30/first-responders-lightning-strikes/14878509/>

The transcript is presented without marks or notes, and then the ensuing discussion is shown.

The following is a transcript of a broadcast on KUSA-TV from 8/30/14 of in interview with Glen Bernard, a CPR instructor and trainer for the American Red Cross. Mark Koebrich & Christine Noël are the news anchors for the 5 o'clock news. Ken Langford prepared the transcript.

Mark Koebrich:

Just this week, two men were hit by lightning trying to take shelter from a storm under a tree...which is one of the things they tell you not to do...one of them was badly hurt.

And just last month two people were killed by lightning only a day apart in Rocky Mountain National Park.

Christine Noël:

Now the positive news here is that 80 percent of lightning strike victims survive – but much of that is dependent on getting medical help pretty quickly.

Mark Koebrich:

Yeah from a guy like this - this is Glen Bernard, he's a CPR instructor and instructor/trainer for the American Red Cross of Colorado, Glen thanks so much for coming by today. So nice to see you.

Glen Bernard:

You're welcome, thanks for having me.

Christine Noël:

We're certainly happy to have you. Now we've been hearing about people getting struck by lightning left & right, it seems like this season, and one of the questions that a lot of people surrounding the lightning strike victim has (sic) is "hey, I felt like this electrical force - like my hair was sticking up... I kinda felt static-y..." and they think that "hey I'm carrying this electronic charge around."

Glen Bernard:

Right, and they don't. Uh, that's pretty brief. Once the strike has hit, these people are safe to touch, and again that's one of the reasons why we need we need to get in - they need urgent medical care as quickly as possible, as long as that scene is safe for us to be

able to help...

Mark Koebrich:
Right.

Glen Bernard:

...remember, it's always 'check the scene, and then check the victim.' Scene is safe, then we check the victim - we're gonna check for breathing/not breathing, we need someone to grab one of these AED's {automated external defibrillator} that I had actually grabbed, ahhh, your AED right here from the station.

(They fumble to get a camera shot of the AED device.)

Mark Koebrich:

In fact the great thing about this machine you say is - and I know a lot of people... they're initially maybe a little hesitant to... help a lightning strike victim... given the fact that they do think they're statically charged - they're not - but you say, you really can't hurt a lightning victim with one of these...

Glen Bernard:

You cannot - you cannot shock somebody who doesn't need to be shocked

Mark Koebrich:

Right - it won't do it. The machine in other words...

Glen Bernard:

It won't allow you.

Mark Koebrich:

...it detects other biorhythms and other things so the machine will not shock someone who doesn't need it.

Glen Bernard:

Exactly. That's exactly true.

Mark Koebrich:

And, this takes you through it... step by step - it gives you audio commands as you go.

Glen Bernard:

That's the great thing about AEDs is basically you watch - when it comes down to the scene, you just do exactly what it tells you to do... and there's no worries, I mean just... step by step it'll tell you what to do - just do what it tells you.

Mark Koebrich:

Follow the directions. Christine had a great question about people who are close together and you say that in fact, in a lightning storm, if you're trying to take shelter from the

storm, one of the key things is not to huddle together.

Glen Bernard:

Correct - they kind of recommend that you spread out - maybe about a hundred yards apart - and that may sound like a distance... but you need to spread out... ah, because we are electrical in nature... and we're basically little walking batteries... that if you're close to one another it's just gonna go "zap zap zap zap..." and get everybody right there in that little group... and so yeah they do recommend that you spread out.

Mark Koebrich:

A hundred yards is a lot.

Christine Noël:

Yeah.

Glen Bernard:

It's a distance.

Mark Koebrich:

Yeah. Yeah, it is a distance. And you say you've actually seen that happen in elk - it's taken out... a lot of elk at one moment because they're all huddled together in a herd...

Glen Bernard:

That is correct - it's happened up in Rocky Mountain National Park... and we saw it happen down last summer in Fort Collins - ah, 'scuse me - in Fort Carson (Colorado).

Mark Koebrich:

Fort Carson, yeah. Large herd. So, what's one of the first thing (sic) you guys do when you arrive at a scene, I mean, say for example, well let's do it this way - you don't have an AED...

Christine Noël:

Yeah...

Mark Koebrich:

... and someone's been struck by lightning - what's the first thing you oughtta do, besides call 911 obviously...

Glen Bernard:

The first thing we always teach in any of our classes is check the scene. Scene safety is so important - where you don't want any more victims... and so you gotta make sure that scene is safe - what are you up against? Are you up against rising water - flash flooding situations... uh, these electrical storms... and it's safe, because we do know on occasion, lightning can strike the same place... twice... it's rare, but it can happen, and so we just wanna make sure that it's safe enough to be able to help that person... once we've determined that, you kinda go in and you do your TAP, or what we call a tap and shout...

to see if we can get this person to respond...

Mark Koebrich:
Right...

Glen Bernard:
... if they're unresponsive at that time is when we need somebody on the phone calling 911... you know, trying to get our hands on an AED, and beginning CPR.

Mark Koebrich:
Yeah.

Christine Noël:
Also a good reminder that if you don't know CPR, this would be a good time to probably have that knowledge.

Glen Bernard:
It would be, so yeah, sign up for one of our CPR classes.

Mark Koebrich:
Yeah, Glen'll... he's teaching classes seven days a week, he's a great guy, and he'll take care of you and tell you how to do it.

Christine Noël:
Wealth of good knowledge, Glen, thank you. We certainly appreciate it.

End of video.

Following the screening of the clip, members were invited to comment. Here is a summary of the discussion.

Al Nibbe was the first but not only voice to exclaim “100 yards?!” Carl Swanson suggested more like 40 feet, Robert Gift suggested simply “spread way out.” Carl checked the NOLS book and quoted page 15: “spread out at 20-foot (6-meter) intervals.” Ken quoted this statistic from the NLSI website: “radial horizontal arcing has been measured at least 60 ft. from the point where lightning hits ground”:
http://www.lightningsafety.com/nlsi_info/little_known_facts.html

Following the discussion of spreading distances, Ken made the point that this message is a dangerous diversion from the most important message, which is “move to safety as quickly as possible.” He cited an example where people were striking the so-called “lightning position” while within easy reach of a safe building. Therefore, a pitfall of delivering lightning safety advice is becoming sidetracked by hypothetical discussions which dilute the main message: head for safety ASAP.

The story was billed as a primer on how first responders should treat lightning injury, and

much time was spent on the AED. At least one person in the group felt there was too much time spent on this topic, since they are not always available, and if available they are so automated that little discussion of the topic is needed. Al and several others observed the interesting inclusion of the term “biorhythms.”

Another term of interest was “walking batteries.” While the term was noted, it was somewhat glossed over in the meeting.

One of the positive highlights of the interview was the recognition “scene safety is so important ...you don't want any more victims.” More direct safety statements would have been helpful.

Here is a summary of the good points from the interview:

1. Do not shelter under a tree.
2. Lightning struck people are safe to touch.
3. Scene safety is important. This is mentioned several times.
4. An automated external defibrillator is safe to use on a lightning patient.
5. Lightning can strike the same place twice.
6. If unresponsive, begin CPR and call 911
7. Learn CPR.

Here is a summary of the undesirable points from the interview:

1. Lots of time spent on the AED {automated external defibrillator}
2. Any focus on “how not to huddle” may delay a move to safety.
3. 100 yards is excessive if spreading is necessary.
4. Elk kills were not attributed to ground currents, which were not discussed.
5. The lightning safety messages were not very concise.

Please forward any additional comments to: sclarktoto@gmail.com.