

**LIGHTNING DATA CENTER MINUTES**  
**June 13<sup>th</sup> 2014**  
**ST. ANTHONY HOSPITAL WEST, LAKEWOOD, CO**  
[www.stanthonyhosp.org/ldc](http://www.stanthonyhosp.org/ldc)

Monthly Quote: “In real life, research is dependent on the human capacity for making predictions that are wrong, and on the even more human gift for bouncing back to try again. The predictions, especially the really important ones that turn out, from time to time, to be correct, are pure guesses. Error is the mode . . . In research, the usefulness of error is that it leads to more research. . . . In order to get anything right, we are obliged first to get a great many things wrong.”

From Lewis Thomas in *The Youngest Science*, 1983

1. Meeting began at 11:50 AM and adjourned at 1:05 PM. Members Present: Collier, J. Parsley, Swanson, Stewart, Elder, Wachtel, Yarnell, D. Gravning, R. Gift, Nibbe, G. Rossie. Swanson moderated the meeting.
2. Carl Swanson sent a link to all LDC members about a truck being struck by lightning while the truck was in motion. Great science-- it shows the charge flowing over the truck's body to ground. The link came from the Today Show on Friday June 6<sup>th</sup> 2014. Al Roker misstated that the rubber of the tires saved the older couple from serious injuries. On Monday June 9<sup>th</sup> 2014, Al Roker tweeted that he was sorry that he misspoke and that it was the metal of the truck's body and frame and axles and metal rims that allowed the current to flow to ground without harming the couple inside the truck. Al Roker said it had been a long week of traveling that caused his mistake. See video link here:  
[http://xfinity.comcast.net/video/274956867689/lightning\\_strike\\_on\\_moving\\_truck\\_caught\\_on\\_camera](http://xfinity.comcast.net/video/274956867689/lightning_strike_on_moving_truck_caught_on_camera).
3. Dr Phil Yarnell gave a talk to the group that he is giving at the LS&ESSI annual meeting in Pigeon Forge, Tennessee (June 26-28, 2014). The talk is titled, “So You Are Going to See a Neurologist - the Neurologic Evaluation and What to Expect.” Dr. Yarnell explores, “What to expect when you are referred to a neurologist” as a lightning strike or electrical shock survivor. First an in-depth look at the patient's history utilizing a pre-established set of questions. Phil mentioned one question that is used for many: have the patient spell a five-letter word forwards and backwards. Dr. Yarnell asks the patient to spell the word “World” forwards and backwards. If the patient has difficulty or cannot do so, Dr. Yarnell said that is an indication of a neurologic deficit. Dr. Yarnell said that neurologists use mnemonics to help them remember the cranial nerves--see the example at the following link:  
<http://radiopaedia.org/articles/cranial-nerves-mnemonic>.

Phil discussed strategies developed for dealing with symptoms like the head injury severity scale where symptoms often include headaches, numbness and phobias. Often symptoms are shared between groups (i.e. PTSD, head injury/traumatic brain injury patients, lightning strike victims, and electrical shock survivors. The larger

category of symptoms involve some degree of “brain dysfunction.” Lightning strike patients can have normal MRI readings, normal cranial nerve function, and reflexes intact but yet still exhibit other persistent maladies. This is a shortened version of Dr. Yarnell’s talk. I cannot do it justice in these few pages of minutes, as it was very good and very technical in medical nature.

Greg Stewart asked Dr. Yarnell whether there is good exchange of information about patient diagnostics and treatments among neurologists. Phil said it’s difficult to establish this exchange when symptoms (of syndrome) vary so widely.

Howard Wachtel asked Phil about the role of a functional MRI, which can show brain metabolism and brain’s oxygenation change. Phil said he would use it but that it is kind of a catch-all for hard-to-diagnose neurologic issues.

Howard Wachtel was asked if he would use the functional MRI diagnostic tool. Howard said he would be reluctant to use it due to on-going debates on side effects and on-going use as a catch-all for such hard to diagnose neurologic problems. In addition, it is still a new research tool and it’s still unproven.

Carl Swanson asked Phil if a lightning strike or electric shock victim came to see him, and the patient had a pre- or post- strike or shock head injury, would it be more difficult to diagnose that patient? Phil said yes since trauma from either can be non-specific and could be from a head injury or lightning or electrical shock. Cause and effect is a very slippery slope when it comes to lightning strike or electrical shock survivors’ symptoms, since head injuries can present similarly to strike victims.

*New info sent to LDC after meeting (5 and 6):*

4. Greg Stewart wants to remind LDC members of the Lightning Safety Awareness Week coming up June 22-28. There’s a link to NWS’s 2013 Weather Forecast Office website at <http://www.srh.noaa.gov/images/mfl/news/LightningWeek2013.pdf>. It highlights a photo of lightning over Doral, Florida, Florida lightning fatalities, Vaisala’s NLDN data, lightning myths, safety tips, etc. Greg Stewart encourages LDC members to share valid lightning safety fundamentals with others. “Historically speaking, the month of June, July and August are the deadliest months from lightning strikes in South Florida (Figure 3). This is due to the combination of our region’s near-daily summer thunderstorms and the plethora of outdoor activities held during this time in which children are out of school.” Also, “Since 2000, ALL of the lightning fatalities in South Florida occurred outdoors...”
5. Greg Stewart also wants to remind all LDC member of the up-coming talk from Dr. Phil Yarnell at the 25<sup>th</sup> annual not-for-profit support group Lightning Strike & Electric Shock Survivors International (Inc.) World Conference in Pigeon Forge, TN (June 26- 28). The LS&ESSI group helps lightning strike survivors and electrical shock survivors get together once a year at the conference in person. They also have a website for survivors to join for a small annual fee to help get information and chat with other survivors of lightning strikes and electrical shock. This year in addition to

Dr. Phil Yarnell speaking at the conference, Dr. Mary Ann Cooper, Professor Emerita of Emergency Medicine and lightning injury specialist, and Ron Holle, Research Meteorologist, will also be speaking. All of these are LDC members! See website link for agenda to the LS&ESSI 25<sup>th</sup> annual conference:

<http://www.lightningstrike.org/DesktopDefault.aspx>.

6. 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.
7. Next meeting: Friday, July 11, 2014m at 11:45 AM at St. Anthony Hospital West. Conference Room TBA.

Respectfully Submitted,  
Carl E. Swanson III