



**Chief's Corner**

**The Changing Face of EMS**

Welcome to the October edition of the Chief's Corner. I hope you are doing well and ready for some cooler weather and the change of seasons. It looks like the rain has finally let up and we are slowly drying out from the recent deluge. I, for one, am looking forward to some nice fall temperatures and beautiful color in the leaves.

Recently, I attended the EMS World Expo Conference and one of the topics that was very interesting to me was the way in which some aspects of emergency medical services will be delivered in the future. For the past number of years, the Lynchburg Fire Department has practiced the age old model of respond, assess, treat and transport. This has served us and the citizens well and we will continue to provide this type of service for the vast majority of the calls for service we receive. However, as the health care system adapts to the way reimbursement for services will change, the department will have to provide a different type of service to some of our patients. We will no longer be able to just transport everyone. Several new "models" for pre-hospital medical care are emerging and the Fire Department will be a major player in the provision of these services.

Future emergency medical services will focus on wellness and preventative care and the reduction in the number of patients transported to the emergency room. We will change from the respond and transport model, to the respond, assess and treat model. When it's possible to treat the patient at home and no longer carry everyone to the ER, the department and the patient will save time and money. We all know of many patients we see who simply need to be assessed and reassured that they have a cold or the flu and would rather remain at home. In this "new model" of patient care, we would not need to take them to the emergency room. We would prescribe a regimen of bed rest, fluids and over-the-counter medications and let them remain at home. If they need prescription medications, we could take care of that as well. Giving the patient a prescription for TamaFlu or a Z-pak and letting them remain at home would save time and the cost of an emergency room visit.

As emergency medical care moves towards treating patients at home instead of transporting everyone, we will need additional dialogistic equipment to assist with diagnosis. Fortunately, technology is improving rapidly in this area and devices that were only available in the hospital or doctor's office before are now practical in the field. It will not be very long before medic units will be equipped with portable ultrasound equipment and machines to do routine blood work. (This technology exists now and it's only a matter of time before it is cost effective to place them on ambulances.)



Another area where the department will be involved is providing routine health screenings and preventative medicine in the communities we serve. Helping to educate our citizens about taking care of themselves and staying healthy will be very important. (As the health care system becomes saturated, it will be even more important to help people stay healthy and prevent having to treat and transport them.) Offering vaccines and preventative healthcare in the home or community will be the norm. It will also be important to assist citizens with "compliance" when they are under a doctor's care. Things like ensuring the patient is taking their medicine and eating properly goes a long way towards helping to prevent a return trip to the hospital. Let me give an example: Let's say you have a patient who has been recently discharged from the hospital with congestive heart failure. It is important to follow-up with this patient for the first several weeks after discharge. If a Fire Department medic goes to see this patient on a regular basis and makes sure they are taking their medications properly and eating correctly, they can prevent another episode of congestive heart failure. All you really need to monitor this patient is good assessment skills, a stethoscope, and a scale. If the patient starts rapid weight gain over just a few days and they are having trouble breathing when they lay down, they are headed for another episode of CHF. The medic would contact the doctor and increase the diuretic and explain to the patient why it is important to watch their salt intake. These simple steps could go a long way towards preventing another trip to the hospital.

Taking these services to the community and decreasing the number of patients we have to transport will not only improve the overall health of our citizens, it will save money as well. We will no longer have the luxury of transporting everyone to the emergency room. Whether we like this new model of healthcare or not, we will have to adapt and learn to embrace the change. If we fail to do so, we will not be providing the services our patients and citizens need. Get ready ladies and gentlemen, the face of EMS is about to change, again!

Well that's about it for this month's Chief's Corner. I hope you have a great fall and are able to get outside and enjoy the season with family and friends.

Keep up the good work and stay safe and never forget the most important rule: "Everyone goes home safe at the end of the shift!"

Chief

**IN THIS ISSUE**

- Chief's Corner
- Anniversaries
- Certifications
- Congratulations
- Governor's Technology Award
- Fill the Boot Campaign Totals
- Retirements
- Training Division News
- Fire Prevention Month
- Health Exchange
- 60 Second Safety
- Reminder



## October Anniversaries

Congratulations to the following members who celebrate anniversaries with the department in October:

### 37 Years

Eddie Campbell

### 34 Years

Ricky Bomar

### 24 Years

Mike Richardson

### 23 Years

Allen Carwile  
Sean Regan  
Quincy Scott  
Tom Bartell

### 19 Years

John Norman  
Warren Jamerson  
Roger Harris  
Darrell Hamlett

### 17 Years

Jason Campbell

## Certifications

### Confined Space Level I

Trey Martin

### Task Force Tips University

Sam Young

### Leadership I, II, III

|                |                 |
|----------------|-----------------|
| Joy Byrnes     | Wayne Casto     |
| Ronnie Coleman | Earl Copes      |
| Will Copes     | Tucker Driskill |
| Ed Fletcher    | Chris Harris    |
| Andrew Jenks   | Abbey Johnston  |
| Joey Kilgore   | Ryan Lee        |
| Bob Mays       | Eric Mendel     |
| Matt Millner   | Adam Morton     |
| Greg Pyton     |                 |

### Leadership I

Todd Styles

### Paramedic

Ricky Davis

### Personnel Mgmt. for Firse Service Applications of Fire Research

Matt Millner

### Incident Safety Officer

Jody Mayberry

### Andy Fredericks Training Days

Steven Evans Jimmy Mitchell

### Electrical Fire and Arson Investigation

Jennifer Collins Scott Hudson  
Danny Williams

## Congratulations

Congratulations to new recruit Chris Mabes and his wife Kelsey on the birth of their son, Oaklen Allen. He was born September 28th and weighed 9lbs. 13 oz. and was 22" long.

## 2015 Governor's Technology Awards

By: Tommy Doss, IT Analyst

On September 9, 2015, at a ceremony in Henrico County, Virginia Secretary of Technology Karen Jackson and Chief Information Officer of the Commonwealth Nelson Moe presented the City of Lynchburg with a 2015 Governor's Technology Award for the Innovative Use of Technology in Local Government.

For 18 years, this prestigious and competitive awards program has recognized the success of public sector information technology projects that improve government service delivery and efficiency in the Commonwealth of Virginia. Specifically, the City of Lynchburg's "Fire Department Tablet Project," was acknowledged as a model of the innovative use of technology in local government.

This project involved the replacement of the Fire Department's aging Panasonic Toughbook inventory with less expensive and more capable Apple iPad devices. Costs recouped by transitioning from \$3,500/unit Toughbooks to \$1,000/unit iPads, as well as the elimination of costly GPS devices, cellular air cards, and digital cameras – the functionality of these devices being replaced, consolidated, and enhanced by the iPad devices – provided the necessary funding to purchase the OneSolution Freedom software. This software was needed to integrate the iPads into the Emergency Communications CAD system, e-Net Messenger licensing to provide communications from iPads in the field to the Emergency Room, and upgrading the overall system to a more robust 4G LTE standard of wireless communication technology. Costs were kept level with no increase going forward while overall efficiency and capabilities were significantly enhanced.

The project also reduced workloads associated with maintenance and training while improving user satisfaction and ease of use. Most importantly, the new system has enhanced the ability of the men and women of the Lynchburg Fire Department to provide outstanding lifesaving Emergency Medical Services to the City of Lynchburg.

EMS Battalion Chief Heather Childress, Information Technology Director Mike Goetz, and IT Analyst Tommy Doss were present to accept the award on behalf of the City.

## 2015 Fill The Boot Campaign A Success!

By: Firefighter Natalie Darling

Our annual fundraiser for the Muscular Dystrophy Association is now complete and the total raised by the Lynchburg Fire Department, as well as the Guns and Hoses softball game totalled just under \$35,000.00.

Although we were a little shy of our goal, this is still a huge accomplishment; and well needed funds will be used in our area to assist patients and families affected by neuromuscular diseases.

I cannot thank you enough for your perseverance and dedication to this cause. As a department, we always shine in comparison to others across the state. We should all feel pride in our accomplishment for this ever worthy cause.

Thank you all for your efforts to help make this years Fill The Boot Campaign a success! Special thanks to Captain McCrickard for his dedication to collecting and depositing the money each day!

## Retirements

Congratulations to the following Fire Department members who are retiring effective November 1, 2015. Thank you for your service to the department and the community.

Miles Tranks

33 Years, 1 Month

Gitau Muhoro

27 Years, 11 Months



L-R: Nelson Moe, Mike Goetz, Tommy Doss, Heather Childress, Karen Jackson



Allen Carwile, Ricky Davis and Shaun Riley

## Training Division News/Notes

By: Battalion Chief Greg Wormser

### Training

The Training Division continues to receive many training requests. There were more than 20 individuals registered for training in the month of September alone, which is fantastic. As part of our commitment to train as many in the workforce as possible, we need to stretch our training dollars across the entire year. When you submit a request for training, we will note on your request what the department will/will not pay for. As a general rule, the department will not pay for meals while training unless the training is required as part of your current position. While this rule and others regarding fees are not absolute, we will do our best to be consistent and equitable for the good of the organization and the customers we serve.

### Be On The Lookout

- A new Training Request Form is coming soon that will increase efficiency and communication throughout the department.
- The following training classes will be offered in the near future. Watch for upcoming details!
  - ICS 300 and ICS 400
  - National Fire Academy Incident Safety Officer
  - Fire Officer II

### Recruit Academy

The Recruit Academy continues to go well and we appreciate staff who have been teaching. It is exciting to witness the development of these new employees and the enthusiasm for which our current employees provide such great training.



Recruit Academy 14

### Burn Building

As part of our ongoing commitment to safety, the burn building was recently inspected and will be undergoing needed repair work. We have also recently upgraded the software for the building and will be upgrading the sensors to newer technology. Finally, we have completed plans for the roof/attic simulator and are working with Campbell County Building Inspections in preparation for ground breaking.

## October is Fire Prevention Month!

### History of the automatic fire alarm and smoke detector

by: Assistant Fire Marshal Matt O'Daniel

In 1890, Francis Robbins Upton, working alongside Thomas Edison, invented the first automatic fire alarm. His invention would sound an alarm when the temperature of a room would get too high. Some credit George Andrew Darby with inventing the first true smoke detector ten years later. Darby's invention was based on Upton's, but he added the particulates from smoke to the sensor design. During the late 1930's, a Swiss physicist named Walter Jaeger was looking to develop a sensor that would detect ionized air that would occur when poisonous gases were present. Unfortunately, his invention did not work as he had intended. Frustrated, Jaeger sat back and lit a cigarette and he soon realized the smoke from the cigarette created a drop in current on the device he was testing. Apparently smoke had done what poisonous gas could not and it helped pave the way for today's modern smoke detector.

During the 1960's, smoke detectors started being mass produced, but mostly for commercial buildings due to high costs. Throughout the 1970's, production increased and prices decreased which made the modern smoke detector more affordable to the homeowner. Today's building code requires all new residential construction to have working smoke detectors.

Fire Prevention Week was established to commemorate the Great Chicago Fire, the tragic 1871 conflagration that killed more than 250 people, left 100,000 homeless, destroyed more than 17,400 structures, and burned more than 2,000 acres. The fire began on October 8, but continued into and did most of its damage on October 9, 1871.



The National Fire Protection Association's (NFPA) key message of this year's Fire Prevention Week campaign is to install smoke detectors in every bedroom, outside each separate sleeping area, and on every level of your home, including the basement. Larger homes may need more detectors.

### Facts about smoke detectors:

- 62% of home fire deaths occurred in homes with inoperable smoke detectors or no smoke detectors.
- 38% of fatal fire injuries occurred in homes with no smoke detectors at all.
- In reported structure fires in which smoke detectors were present but did not operate, 50% of the detectors had missing or disconnected batteries. The leading reason for the disconnected smoke detectors was because of nuisance alarms.
- 23% of smoke detector failures were due to dead batteries.
- Approximately half of home fire deaths result from fires reported between 11 p.m. and 7 a.m., when most people are asleep.
- Smoke detectors save lives. If there is a fire in your home, smoke spreads fast and you need smoke detectors to give you time to get out. In fact, having a working smoke detector cuts the chances of dying in a reported fire in half!

Remember, as we approach Daylight Savings Time on Sunday, November 1, when you change your clock, remember to change the batteries in all your smoke detectors and test them monthly to be sure they work.

Change your clock,



CHANGE your batteries

## Health Exchange

By: Firefighter Kenny Bunch

I would like to dedicate this month's article to retiring Fire Fighter Miles Tranks. I doubt that there are many people here that Miles has not inspired in some way or another, whether it was through fitness advice, nutrition, or how to recover from injuries. Miles has a commitment to fitness that has been an inspiration to a large number of us. When I was hired, I had already started running, with limited success. Fortunately, I was first assigned to Station 3 with Miles, and I eventually found out what a valuable resource Miles is. He taught me the importance of good running shoes, cross training, and fueling your body to get the most out of it. He also became a valuable resource for injury recovery and prevention. As my mileage would increase, so would my injuries, and I could always count on Miles having had each injury in the past. He would know the fastest way to recover and get me back on the road. I could also count on his advice and encouragement being full of adjectives that I can't print in this publication, but that was just part of the fun of Miles. I know I'm not alone; Miles has shared his knowledge and experience with a great many of us, and he was always ready to meet up for a run, or meet at the gym. While Miles is retiring, I feel confident that any of us could call him up any time with any questions, or to meet up for a workout. Miles has been both my personal inspiration, and the inspiration for this column. Miles left here healthy and strong, and able to enjoy the next phase of his life, which is what I would like to see each and every one of us do when the time comes.

### COUNTING



### CALORIES

The rest of this month's article is an expansion of the past two months' articles. I received a request to give a few more examples of the calorie equation. Remember the 10 percent rule, which states that for a 200 pound person to maintain their weight, they need 2,000 calories per day, based on average activity level. This makes the math simple, and most nutrition labels are based on 2,000 calories, which makes portions easy to keep track of. I suspect food packagers do it this way to keep things easy, and they take for granted that 200 pounds is the average weight of most Americans. The trouble with using this as an average, is remembering that 65 percent of Americans are overweight. It is no wonder so many people are overweight, with nutrition labels and portions as they are. If you weigh 320 pounds, and you want to maintain that weight, you can take in 3,200 calories. If you weigh 320 pounds and want to weigh less, you need to create a calorie deficit based on how fast you want to lose weight. The handy thing about this is, the more you weigh, the larger calorie deficit you can tolerate. Remember I said before, you need to be careful that you don't cut your calories too much, which can cause weakness and fatigue. That's why it is easy to lose weight in the beginning, but the closer you get to your target weight, the harder it becomes to lose. For instance, the 320 pound person can tolerate up to a 1,500 calorie per day deficit, whether that is all based on intake, or part of it is in burned calories, which would result in a three pound per week loss. By way of comparison, a person that weighs 185 pounds should really only have a deficit of 700 – 800 calories per day which will result in a loss of 1.5 pounds per week. Reducing calories by much more than that can cause significant problems.

I also want to dig a bit deeper into the significance of heart rate. Your heart rate is your own personal tachometer. Monitoring your heart rate, both during exercise and during rest, can give you valuable information about your health and

physical condition. Last month I told you how to calculate your maximum heart rate, and I discussed the significance of aerobic and anaerobic states, and how to tell the difference. Something else I want to mention about raising your heart rate into the anaerobic range is that this is the point your cells are using more oxygen and creating waste faster than they can process it. This causes a buildup of lactic acid in your muscle cells, which then affects their ability to process fuel and oxygen, resulting in fatigue and performance failure. This is why you can only perform at 100 percent of your maximum heart rate for short periods. The balancing act it to get your heart rate as high as you can in the aerobic phase to maximize your calorie burn without crossing that threshold where your cells start producing more waste than they can process. This is something that can be learned with time and practice. This is also something that you can alter over time, as your body becomes more accustomed to operating at higher heart rates. You can raise your estimated maximum heart rate, thereby raising the amount of effort you can exert for extended periods of time.

Another way your heart rate can give you an idea of your physical condition is how quickly it can return to normal after exertion. This is called your recovery rate, and is calculated as follows. Record your heart rate at 75-85 percent maximum heart rate, then rest for one minute, and record your heart rate again. Take the difference and divide by 10. Six and above is excellent, four to six is very good, two to four is average, and below two has definite room for improvement. There is also a benefit to recording your resting heart rate; the best time for this is first thing in the morning. As your physical condition improves over time, your resting heart rate should decrease. If you find that it is going up over time, this is an indication that you are pushing yourself too hard, and not giving your body enough time to recover.

In closing this month, I would like to thank everyone who has offered positive feedback and words of encouragement. It means a lot, and if I can help just one or two of you reach your goals or lead a healthier life, it is worth it.

## 60 Second Safety

By: Captain Danny Williams

### Air Monitoring

Are we wearing our airpack long enough? Is the air monitoring that we are performing ruling out all of the harmful constituents found in smoke?

As we know, smoke is a by-product of combustion that is filled with carbon particles and other harmful elements; like carbon monoxide, hydrogen cyanide, formaldehyde and other cancer causing agents. Sometimes these gases can be found in areas where there is no smoke due to their chemical properties.

It is imperative that we maintain a high index of safety during all operations, even if we are performing defensive tactics and overhaul operations. So, before we are too quick to take our airpack off, let's think about the harmful effects of gases and particulate matter that smoke produces.

### Reminder

The Annual Fallen Fire Fighter Memorial Service will be held on Sunday, October 11, 2015, at 2:00 p.m. at the Fire Fighters Fountain in Miller Park.