FIRST QUARTER **2018**

SafetyMatters

America's Medical Transportation Safety Newsletter

A quarterly, collaborative publication
from MedFlight and HealthNet
Aeromedical Services

THIS ISSUE INCLUDES:

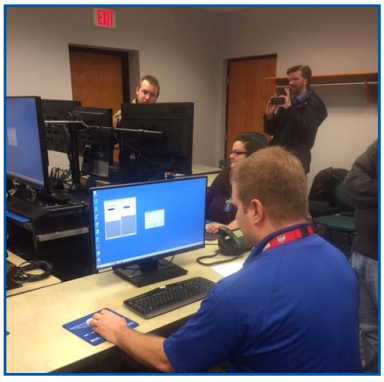
MedComm Emergency Dispatch Readiness Console

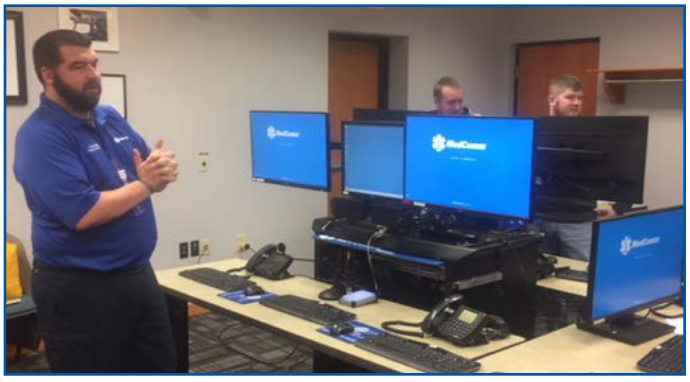
By Amanda Ball, Safety Officer, MedFlight

Of course we hope it never happens, but if it does, MedComm can evacuate its current location within minutes. MedComm's evacuation plan consists of a written procedure and this procedure is evaluated and updated routinely. In compliance with the Commission on Accreditation of Medical Transport Services (CAMTS), MedComm evaluates and tests the evacuation procedures at least twice a year. The testing and review of the evacuation procedures are necessary and required to provide emergency dispatch communications for the patients we serve.

MedComm, providing dispatching services for MedFlight, Memorial MedFlight, Nationwide Children's Transport Team and ProMedica Air and Mobile, who are all accredited by CAMTS, must have the proper mechanism to continue supporting dispatching services while being remote and away from our current communications center. This mechanism, to achieve continued support and communication is achieved by using our MedComm Emergency Dispatch Readiness Console (MEDRC).

The MEDRC supports our communication specialists with every piece of technology they operate in MedComm, but allows them to be remote and quickly on line. In some cases, and depending on the urgency of the evacuation, no downtime will occur when activating the MEDRC. If there would be unforeseen downtime, radio communications, to all active transports would remain in place and never be disrupted. The MEDRC houses our dispatching computer aided dispatch software, VoIP phone system, RoIP radio system, and all other necessary software and applications. All of the hardware for these necessary items are all self-contained within the mobile and secured MEDRC. The MEDRC hardware and software are routinely checked for functionality to ensure, when we do need to evacuate, MedComm is ready. ■





MedFlight

HealthNet Aeromedical Services

Mission. Ready.

The Time Has Come... To SHARE THE AIR with Unmanned Aircraft Systems

By Amanda Ball, Safety Officer, MedFlight

"I just happened to see it. It wasn't moving, it was just hovering, so it blended into the background at first. But when I looked outside of the aircraft as we were on short final, there it was… above our aircraft at our 2 o'clock."

Not words you want to hear from your flight crew on a weekend night. Luckily, the unmanned aircraft, better known as a drone, did not fly any closer to our helicopter during the helipad landing, and the drone pilot could quickly be located and directed to land his aircraft.

Right now, there are around 2.5 million drones that regularly fly over American skies, according to the Federal Aviation Administration. In 2020, that number could almost triple, with 7 million drones projected to be active and registered. Of the current drones registered, they're roughly split between 1.5 million hobbyist drones and 500,000 commercial. While those flying in a commercial and/or emergency response capacity are required to have FAA licensure and training to do so, hobbyist pilots have less restrictions. They are asked to register their aircraft and notify local air traffic officials that they are going to be flying near their airspace, but those two steps are largely based on an honor system.

To gather some basic knowledge of hobbyist UAS pilots and UAS usage in the Columbus area, we joined a few local drone pilot forums and groups online and started asking questions:

1. Do you know who MedFlight is, where we fly?

The answer was largely "No."

2. Did you know that medical helicopters fly near the same altitude as you, regardless if you're flying in an urban or rural setting?

Again, the answer was largely "No."

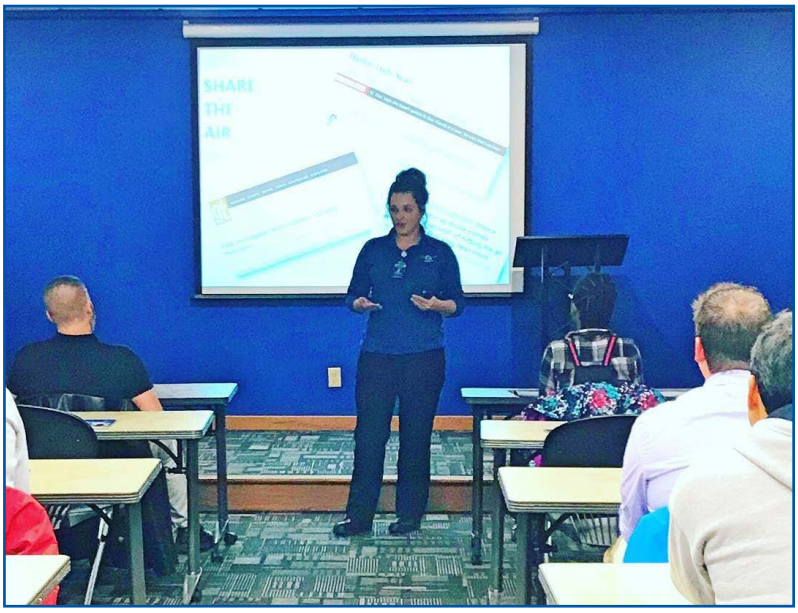
3. Have you registered your aircraft? Do you habitually notify your local airport that you'll be flying in the area?

Roughly half did somewhat regularly, half didn't.

4. Did you know you're not allowed to fly within 400ft of a hospital helipad?

Largely, the answer was "No."

While those who responded were more than happy to join a conversation about these topics, we realized that the conversation had not yet really started between the two industries. To open communication we created "Share the Air," a workshop for hobbyist drone pilots, held at our Columbus headquarters in January 2018. We invited hobbyist UAS pilots to join us for a two-hour training session featuring lectures from MedFlight officials, The Ohio State University Airport, and the FAA. Attendees checked out a MedFlight helicopter and also trained with a local, vetted, licensed commercial UAS company that prides themselves in safe flying practices.



UAS pilots told us that they gained a better understanding of what flight crews do and pledged to think twice before flying above their altitude restriction, before flying near a hospital, etc. MedFlight learned something as well, these are good people, who have new technology in their hands and don't have ill-intent while flying. With the success of the event, we were able to create a workshop template that can be replicated in other parts of Ohio and utilized by all our flight teams by partnering with their local aviation officials.

Rather than solely view the UAS industry as simply a threat to safety and well-being of our flight teams, which it can be, also remember that we have the opportunity to teach them safe practices, so they can relay that info amongst their fellow hobbyists. Be an example, be a local contact, be a mentor on how others can "Share the Air".

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The Time Has Come... To SHARE THE AIR with Unmanned Aircraft Systems *Continued*

Need more information on flying Unmanned Aircraft Systems?
faadronezone.faa.gov

Advanced training for UAS pilots with Part 107 FAA licensure:
FEMA AWR-345
"Unmanned Aircraft Systems in Disaster Management"
ndptc.hawaii.edu

Want to learn more about "Share the Air"?
Amanda Ball, Safety Officer, MedFlight
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www.medflight.com ■

Slow Down the Spread of Disease with Social Distancing

By Karen Swecker, Exposure Control Liaison, MedFlight

'Tis the season for runny noses, achy bodies, and rampant flu. With simple steps, you can help slow the spread of infectious disease. Social distancing is a term applied to certain actions that are taken by healthcare providers to stop or slow down the spread of a highly contagious disease. These helpful hints can also be used by us all to slow the transmission of influenza.

SOCIAL DISTANCING TIPS AND TRICKS

- **If you are sick with flu symptoms STAY HOME!**
- Carry pocket size hand sanitizer, using it frequently.
- Avoid handshakes, hugs and kissing. Use fist or elbow bumps instead! Your loved ones will thank you.
- Avoid rushing while eating. Eat earlier/later/alone or just with 1 or 2 people, sitting at a distance of at least 3 feet apart.
- Use your own ink pen. Do not share or use public pens.
- If in a crowded public location, find a space that separates you by at least 3 feet.
- Use a larger room for face-to-face meetings.
- If you develop a fever, stay away from others.
- Wear PPE (especially a mask) when transporting potentially infectious patients.

Remember: a person is contagious and able to spread the flu approximately **24 hours before any symptoms appear.** Adults remain infectious for up to one week and children for two weeks after onset of symptoms.

Stay safe and stay healthy! ■

5 Evidence-based Countermeasures for EMS Fatigue

www.ems1.com

By Daniel Patterson, Matthew Weaver, and Francis X. Guyette

Our first article, "Studying sleep: Health and fatigue in EMS" provided a brief overview of sleep health and fatigue and called upon EMS clinicians and administrators to:

1. Recognize that poor sleep and fatigue are threats to EMS safety
2. Get involved in research that can help us better define the problem and test solutions for the safety of our clinicians and patients

In this article, we discuss fatigue risk management and highlight some (not all) evidence-based countermeasures for fatigue mitigation in the EMS the workplace.

FATIGUE RISK MANAGEMENT SYSTEM

A fatigue risk management system (FRMS) or a fatigue risk management program (FRMP) is defined as "A scientifically based, data-driven, addition or alternative to prescriptive hours of work limitations which manage employee fatigue in a flexible manner appropriate to the level of risk exposure and the nature of the operation."[1]

For a FRMS or FRMP to be successful, it must have a strong leader or senior manager who is accountable for day-to-day oversight, adaptation, and improvement of the program. There should be fatigue management policies developed collaboratively by employers, workers, and all stakeholders. Workers and administration should receive education and training in sleep health and self-recognition of fatigue.

Administration should adopt a process that promotes reporting fatigue without fear of penalty or reprisal. A process for investigation of events potentially related to fatigue is important for evaluation and improvement. It is optimal that individuals or groups outside the organization lead evaluation or audits of an agency's FRMS or FRMP program. Both the organization's leadership and workers (clinicians) must share responsibility for development, implementation, evaluation, and improvement of the FRMS or FRMP.[1]

Managing fatigue in the workplace – especially the EMS workplace – is a challenge. Our understanding of EMS work-related fatigue is limited.[2] We understand that EMS clinicians are vulnerable to fatigue, inadequate sleep, and poor recovery from shift work.[3]

EMS FATIGUE COUNTERMEASURES

While the nature of EMS work is unique from many other occupations, fatigue can be mitigated with a number of evidence-based strategies. There is no "one-size fits all" approach to fatigue management and no single strategy will fully eliminate the threat of fatigue in the workplace.[4] Numerous individual-level, environmental factors, social factors,

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5 Evidence-based Countermeasures for EMS Fatigue *Continued*

scheduling and work-related factors, as well as many other known or latent factors must be considered when developing an FRMS or FRMP.[4] What works for an air medical service in the northeastern U.S. may not work for a third-service, ground-based EMS system in the western or midwestern U.S. Use the following five strategies to mitigate fatigue:

1. PROMOTE ADEQUATE SLEEP FOR EMS PROVIDERS

Regardless of the components of an FRMS or FRMP adopted, the top strategy should be universal; adequate sleep. There is no substitute for adequate, good quality sleep. Insufficient sleep has been identified as a direct cause of vehicle crashes, errors that harm patients, worker injury and reduced productivity of the workforce.[5, 6] Adequate sleep is key to health and wellness. There is individual variability in how much sleep each worker may need, but at least seven hours per night should be encouraged.

Other person-level countermeasures supported by evidence include the following:

2. ENCOURAGE NAPS AND REST BREAKS

Taking naps or rest breaks during shift work. Numerous studies of shift workers support use of short-duration naps (e.g., 20-30 minutes) during scheduled shifts.[7-11] Actual sleep may not be needed, and the act of resting with one's eyes closed in a quiet location can be beneficial.

Extended naps on duty may result in sleep inertia – that groggy feeling immediately after awakening.[12] Sleep inertia can last minutes or even hours after waking and impact cognition/performance.[12] Administrators and clinicians should discuss use of naps as part of an intra-shift countermeasure to fatigue.

3. INCREASE PHYSICAL EXERCISE

Alertness can be elevated with physical exercise such as stretching, walking, jogging in place, and other activities that increase the heart rate and body temperature.[13, 14] Clinicians should consider use of physical exercise when feeling sleepy on duty. Exercise can help thwart perceived feelings of sleepiness and help maintain alertness – to some degree.

Exercise is not a panacea for fatigue or sleepiness. Prior research shows that exercise may alleviate perceived sleepiness and improve wakefulness by increasing body temperature, yet cognitive performance may not return to levels associated with being well-rested.[15] In short, you may be more "awake" after a bout of exercise, but you may not perform at your best mentally or physically. Again, there is no substitute for adequate rest and sleep.

4. LIMIT CAFFEINE CONSUMPTION

There is considerable research linking improvements in alertness with consumption of caffeine.[16] Despite benefits, clinicians should exert caution and avoid over-consumption of caffeinated beverages – including energy drinks. Seizures and cardiac dysrhythmias have been linked to over-consumption of caffeinated energy drinks.[17, 18]

One approach to consider is to have a cup of coffee and immediately take a short nap (i.e., 20 minutes) – since caffeine takes about 30 minutes to kick in, and sleeping too long may lead to sleep inertia.[12] This two-pronged approach can work – especially for those working night shifts.[19] With anything, use caution, and don't forget, your best strategy is to obtain adequate rest and sleep!

5. ENGAGE IN MENTAL EXERCISE

Engaging in conversation (talking) with partners to stay awake and alert when feeling sleepy is a type of mental exercise. The simple act of talking with your partner while on duty can help support alertness.[20]

There is no question that individual EMS clinicians face numerous challenges managing their own sleep health. Employers also face challenges filling schedules and ensuring continuous availability of EMS care.

We offer these strategies for fatigue mitigation because the issues are complex, and as we have said before (and affirmed by others in different industries),[4] there is no single "one-size-fits-all" solution for fatigue risk management in the EMS setting. The mitigation of fatigue in the workplace must be a shared responsibility between the clinician and employer.[1] EMS must support a culture of safety where clinicians arrive to work well rested and employers support employees to report fatigue without hesitation.

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5 Evidence-based Countermeasures for EMS Fatigue *Continued*

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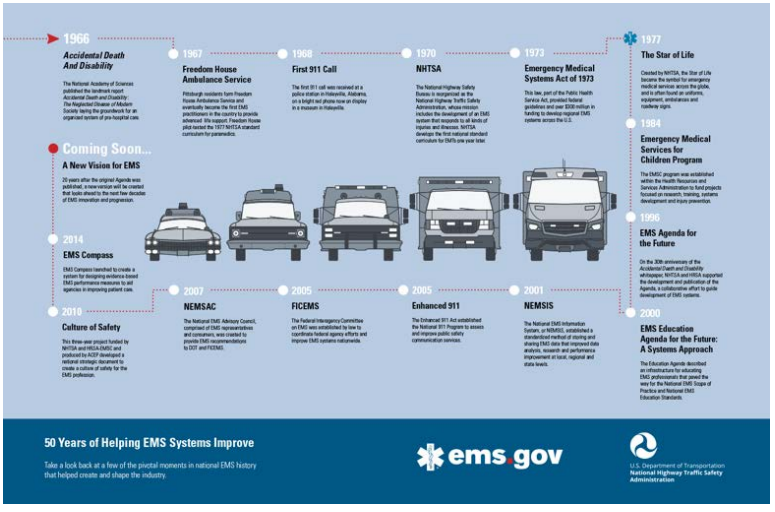
The Changing Culture of EMS

By Jeff White, Director of Safety

Emergency Medical Services, as an industry, has drastically changed over the last fifty plus years. When EMS began, it was mostly run by funeral homes and the mission at that time was to load a patient and transport to the nearest facility as fast as possible. As the industry progressed we became medical practitioners and differentiated ourselves from most other health care entities. Unfortunately, we have kept some of the "traditions" from all those years ago. When it comes to safety in EMS we are at a slight disadvantage due to these traditions such as long shifts, multiple places of employment and large vehicles driven at high rates of speed with lights and sirens often distracting other drivers on the road.

So, how do we make significant changes in EMS safety? For many, the answer is increase pay to eliminate the need for multiple jobs, change ambulance design, change driving standards, increase EVOC training and increase the need to simulation in patient care education. While all of these are great ideas and very beneficial, they do not get to the core of what the largest safety concern in EMS is: people!

Any safety system is only as good as the people functioning inside of it. If you do not have the culture in your system and employees willing to maintain the high standard considering the sacrificing of revenue, it becomes increasingly more difficult to have a true safety culture. If the employees in your program do not feel empowered to discuss safety concerns, ask questions to truly understand the safety processes you have in place and report issues that need reported you will always remain one step behind as an organization. Unfortunately, for many administrators there is no cookie cutter mold established due to the variations in squad response type, size and area. As an industry there has been much discussion of taking safety direction from the aviation industry to incorporate items such as crew resource management, root cause analysis, data collection and interpretation. All of these items can be greatly beneficial if applied in the right atmosphere and increase the overall safety of the company. However, if a company is not willing to hold people accountable any safety inactivates that are put into place are merely smoke and mirrors to meet all the checkboxes required for a National credentialing process, and not effectively managing safety. The picture below shows how far we have come in EMS, but it is up to us as individuals to make the decision we want the industry to rise to levels never seen and make our livelihood as safe as possible. ■



Helicopter Emergency Training for First Responders

December 2017 brought big changes to Aircraft Rescue FireFighting (ARFF) in West Virginia. WVU Fire Service Extension (WVUFSE) purchased a helicopter ARFF burn simulator to train West Virginia Fire Departments since there has been an increase in number of helicopters seen in the state. HealthNet Aeromedical Services Director of Safety and WVU FSE instructor Jeff White has been assisting WVU FSE instructor Cory McCartney and ARFF Program Coordinator Ralph McNeamer in this endeavor. Cory is retired Air Force Firefighter from Andrews Air Force Base, so the course covers the civilian helicopter air ambulance industry and military aircraft that will most likely be seen in the state. This is an amazing addition to the fire service educational arsenal in the state and will continue to grow as an educational program. ■

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Intranet Website Resources:

- Safety Awareness Form – The link to the form is located under the Safety section.
- Unusual Occurrence Form – The link to the form is located under the Forms section then under Administrative Forms.
- MedDebrief System – The link is found under the quick links on the intranet and is automatically activated after a medical transport.

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Intranet Website Resources:

ninthbrain

NinthBrain can be accessed via the worldwide web at suite.ninthbrain.com

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