

**THE**

# MOBILITY FORUM

THE MAGAZINE OF AIR MOBILITY COMMAND | FALL 2018



Col Leslie Maher Recaps  
**Being On the Front  
Lines of Hurricanes  
Matthew and Maria**

Outgoing EC Commander  
Maj Gen Bence Speaks About

**the Value of  
Leadership and  
Relationships**

**Providing  
Emergency  
Patient Care ...  
at Altitude**

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Volume 27, No. 3  
Fall 2018

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Gen Carlton Everhart II



## DIRECTOR OF SAFETY

Col Brandon R. Hileman  
[brandon.hileman@us.af.mil](mailto:brandon.hileman@us.af.mil)



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TSgt Traci Keller, 60 AMW Public Affairs broadcast journalist, shares a moment with a local child after covering the delivery of emergency response vehicles through the Denton Program at La Aurora International Airport, Guatemala City, Guatemala. The Denton Program is a DoD transportation program that moves humanitarian cargo, donated by U.S. based non-governmental organizations to developing nations to ease human suffering.

USAF photo by  
MSgt Joey Swafford

*The Mobility Forum* (TMF) is published four times a year by the Director of Safety, Air Mobility Command, Scott AFB, IL. The contents are informative and not regulatory or directive. Viewpoints expressed are those of the authors and do not necessarily reflect the policy of AMC, USAF, or any DoD agency.

**Contributions:** Please email articles and photos to [info@schatzpublishing.com](mailto:info@schatzpublishing.com), fax to (580) 628-2011, or mail to Schatz Publishing, 11950 W. Highland Ave., Blackwell, OK 74631. For questions call (580) 628-4607. The editors reserve the right to make editorial changes to manuscripts.

denotes digitally enhanced photo.

**Subscriptions:** U.S. Government Publishing Office: 2018-545-110/10013. For sale by the Superintendent of Documents, U.S. Government Publishing Office. Internet: [bookstore.gpo.gov](http://bookstore.gpo.gov). Phone: toll free (866) 512-1800; DC area (202) 512-1800. Fax: (202) 512-2104. Mail: Stop IDCC, Washington, DC 20402-0001.

AMC RP 91-2. Dist: X

ISSN 1559-159X

Visit [www.themobilityforum.net](http://www.themobilityforum.net), or find the most current edition on AMCs home page: [www.amc.af.mil](http://www.amc.af.mil).

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Maj Gen Christopher J. Bence, commander of the U.S. Air Force Expeditionary Center, tours the facilities of the 8th Expeditionary AMS at Al Udeid AB, Qatar, March 4, 2018.

USAF photo by SSgt Joshua Horton

## Outgoing EC Commander Maj Gen Bence Speaks About the Value of Leadership and Relationships

BY MS. KIM KNIGHT, STAFF WRITER

Maybe the old adage is true that “all good things must end.” But not everyone who retires from a lifelong career can say they’re leaving behind a legacy that will continue touching lives worldwide for years to come!

I caught up with Major General Christopher J. Bence, Commander of the U.S. Air Force Expeditionary Center (EC) at Joint Base McGuire-Dix-Lakehurst, New Jersey. We discussed accomplishments of the EC enterprise under his command and he shared some parting thoughts as his official retirement approaches in December. He began with an overview of the EC, which cares for eight subordinate organizations.

“To help us better support those organizations, we operationalized the staff,” he explained. “We created a directorate of plans, a directorate of

logistics, and a directorate of strategy and policy so we can continue to deliver Rapid Global Mobility around the world.”

Bence said the U.S. Air Force Expeditionary Center puts the “RAPID” in Rapid Global Mobility through its five lines of effort:

- › Responsive Joint Base and Installation Support,
- › Agile Contingency Response Operations,
- › Persistent Global En Route Operations,
- › Innovative Expeditionary Education and Training,
- › Develop World-Class Airmen.

He then explained how EC activities enhance partnerships within and outside of the Department of Defense and the Air Force.

“We provide Responsive joint basing and installation support. For example,

we maintain close relationships with the 80-plus mission partners at McGuire-Dix-Lakehurst. That includes events like staging for FEMA [Federal Emergency Management Agency] relief efforts and joint exercises like Mobility Guardian. Over 30 nation partners participated in that last year—about 3,000 personnel.”

To exemplify Agile contingency response operations, he talked about the Mobility Support Advisory Squadrons.

“The west coast squadron, which is predominantly Spanish speaking, works a lot for SOUTHCOM in Central and South America. We have a team in Panama now and one in Guatemala. Our east coast squadron is predominantly French speaking Airmen who work a lot for AFRICOM. Those squadrons build partnership capacity around the world.”

The Persistent global en route operations are top notch, according

“

The foundation for success is truly abiding by Air Force core values: integrity first, service before self, and excellence in all you do every day.”

to Bence. Indeed, 23 countries are on the receiving end of command and control, aerial port operations, aircraft maintenance, and aeromedical evacuations. He added that installations everywhere develop valuable relationships with host nations, allies, and partners around the world, which will be in place when a crisis happens.

“Innovative expeditionary education and training is ongoing, too,” he said, “in subjects ranging from aircraft maintenance to intelligence to combat skills. One recent Phoenix Raven graduate was from Norway, and an air advisor course included four British personnel who were going to stand up operations in Afghanistan. Everything we do enhances our relationships with partner nations.”

Bence said that Developing world class Airmen is a cornerstone of the EC and drives the staff to meet continually changing demands.

“When combatant commanders needed increased Air Force personnel to deploy, we doubled the amount of training for those personnel,” he continued. “We train for hostile environments, as well as uncertain environments like personnel may find in Africa. We went from approximately 2,000 students per year to over 4,000, and most courses are about three weeks long.”

He said the EC expanded training to meet requests for things like production supervision, missile maintenance, and bomber maintenance. And oh yes, there was the Mobility Guardian exercise ...

“We provided all the base operating support at Lewis-McChord, and our contingency response forces simulated opening airfields in austere locations—but in Washington State, of course. Plus, we deployed and opened a main operating base and helped stand up an aeromedical evacuation staging flight. Our forces partnered with Australian forces, which turned out great!

The Expeditionary Operations School teaches on site and online, and courses give Community College of the Air Force credits. Bence said in 2017 alone, the EC graduated over 43,000 students and handed out almost 30,000 credits!

It is hard to condense his long and illustrious career into these few pages without mentioning a few extraordinary efforts, some of which occurred simultaneously or in quick succession. As he deployed a contingency response team after Hurricane Matthew, which devastated the Caribbean and Haiti, his team in Iraq was opening a critical air base that ultimately allowed the Iraqi Air Force to clear Mosul. A few weeks later, a third team went to Syria to build a landing zone so Syrian partners could fight against ISIS.

“In Iraq, that meant 340 missions, 3,000 passengers, and over 440 tons of cargo,” he said. “At the Syrian airfield, there were 230 missions, 14,000 personnel, and over 3,000 tons of cargo. Then came hurricanes Harvey, Irma, and Maria. Contingency response forces deployed, and we provided command and control expertise to the air operations center in Florida, where they ran over 800 sorties and moved 11 million pounds of relief effort very quickly.”

Regardless of the location or events, Bence said working alongside skilled Airmen who respond to the world’s needs 24/7, all 365 days a year, means he never had a bad assignment.

“They and their families made this a career instead of just a job. Everywhere I have been was equally memorable, rewarding, and fulfilling. I can’t think of a better way to close my career than as a U.S. Air Force EC commander with a phenomenal mission and a great bunch of Airmen.”

He left them—and you—some words of wisdom.

“The foundation for success is truly abiding by Air Force core values: integrity first, service before self, and excellence in all you do every day. Also, I hope we created conditions where people really enjoy their work. Obviously, we must not compromise safety, but if you aren’t having fun, then you’re doing something wrong. Finally, I challenge you to learn something each day, whether personal or professional.”

In closing, General Bence said he is grateful for his wife Wendy and daughters Breanna and Rebecka who served along with him for the duration of his incredible career, and they look forward to the next chapter in life. 🇺🇸

The Expeditionary Center is the Air Force’s center of excellence for advanced combat support training and education, while also providing direct oversight for en route and installation support, contingency response, and building partner capacity mission sets within the global mobility enterprise. The Expeditionary Center provides operational control of the Expeditionary Operations School and administrative control for five wings and two groups within Air Mobility Command.

# CMSgt Joshua Franklin, Career Field Manager, AFSEC, Discusses Making the (Career) Grade

BY MR. MONTE NACE, STAFF WRITER

It can be difficult to think too far ahead when you are in your 20s and 30s, but the best way to ensure a long, successful, professional career in safety is to have a clear picture of where you want to go. Wouldn't it be great to have a roadmap to help you get from Point A to Point B?

CMSgt Joshua Franklin, Career Field Manager at the Air Force Safety Center, Kirtland AFB, will be retiring December 1 after a long history of service. From his experience and in-depth knowledge, he created a roadmap and was willing to pass along some parting advice with readers of *The Mobility Forum*. For starters, we asked how he defines an Air Force safety professional.

"First, we are unique because this is the only service that has full-time military paired with Department of Defense civilians," he said. "The professional part begins with training and education. From there, it is about people who make the deliberate choice to learn, grow, and make an impact on others."

Franklin has seen many major improvements through the years. For example, the AF now works with OSHA (Occupational Safety and Health Administration), particularly on slipping and falls from heights. When OSHA first became law, the military did not have to comply.

"That was a detriment to Airmen for decades," he explained, "but now we

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“  
The implementation of a safety management system gave us a way to show that what we do is working.”

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are in the second 12-month period<sup>1</sup> with no occupational/industrial deaths in the Air Force. That hasn't happened since 1943 when ground safety was established."

When Franklin cross-trained from aircraft maintenance to safety in 2004, he said getting a degree was uncommon, and certification in the military did not exist. In just seven years, though, the organization has gone from having no active duty Airmen with certifications to just over 25—plus 20 civilians (AF wide) with high-level certifications and just as many in the Guard and Reserves.

"The implementation of a safety management system gave us a way to show that what we do is working," said Franklin. "Implementing an international consensus standard has led to things like the Air Force Safety Center winning the 2016 National Safety Council (NSC) Excellence Award." Additionally, he was selected as one of the NSC Rising Stars of Safety in 2013—the only AF representative to

<sup>1</sup> At the time of the interview (May 2018).



Representatives of the American Society of Safety Engineers visited the Air Force Safety Center, Kirtland AFB, N.M., to discuss current and future ways to collaborate on national consensus standards that affect the Air Force, as well as training and development of safety professionals. Left to right: Bill Parsons, Chief of Air Force occupational safety; Tim Fisher, ASSE Director of Standards and Technical Services; CMSgt Joshua Franklin, Air Force Safety Career Field Manager; Mike Ballard, Deputy Chief of Air Force occupational safety; and Tom Kerschner, ASSE account executive.

receive the award that year. A testament to the excellence of Air Force safety professionals is that one has been selected as an NSC Rising Star of Safety every single year since 2010.

"No other organization has won consecutively more than twice, and no organization has been picked more than three times," he continued. "This really says something about the training, education, and character of the people in this career field."

According to Franklin, there are plenty of choices for AF safety personnel to consider when it comes to professional development. For example, the Mishap Investigation Non-Aviation Course, which was optional for nearly 20 years, is now a mandatory course with funding. Also, under the Air Force Credentialing Opportunities Online (AF COOL) program, Airmen get a fixed amount (currently \$4,500) toward their choice of career certifications. It pays



for things like certification preparation, exam fees, and annual fees for renewing or refreshing certifications.

“Last year,” he added, “the Air Force partnered with the American Society of Safety Professionals to bring in all active duty 1SOX1s and civilian safety professionals at the MAJCOM level with occupational safety duties—and the Guard brought in Airmen—for webinars and other resources they need to further develop as professionals.” The takeaway is just that: Airmen can take their credentialing units anywhere in the world. This year, the partnership will include all AF occupational safety civilians.

So how does the AF attract such talent into this arena and, more importantly,


how do they keep them there when they could earn an average of \$100,000 per year in the private sector? Franklin believes it starts with sourcing safety professionals.

“We were getting potential candidates from basic training, but now we focus recruitment on Airmen who’ve been in the Air Force for at least 4–6 years,” he said. “We do interviews and a 10-day assessment, putting measures in place to make sure they are serious about safety. Then, we must continue investing in training them so they don’t get bored in their jobs and leave. Most do not come into the service for a six-figure salary like private sector jobs pay. I think they genuinely want this career, and they will continue to serve if we give them training, opportunity, and a job with purpose.”

Franklin said the AF is willing to invest in people who focus exclusively on risk mitigation and on the health and safety of Airmen because of the proven return on that investment. The NSC says that for every \$1 spent on health and safety, it returns \$3 to \$6 in cost savings and operational effectiveness.<sup>2</sup>

“That overall strategy is apparently working if you look at their willingness to stay,” he concluded. “We have an 89 percent retention rate all the way to retirement, which is rare and usually only happens with special ops or a huge reenlistment bonus.”

In closing, Franklin expressed appreciation to all safety personnel for their dedication.

“The Air Force made the commitment to have full-time safety professionals. Those of you who answered the call don’t take that commitment lightly. You put your hand up to defend the constitution, but you also put your hearts and minds into protecting Airmen’s lives every day. You are making a difference. Thank you!” 

<sup>2</sup> [www.safetyandhealthmagazine.com/articles/10414-the-roi-of-safety](http://www.safetyandhealthmagazine.com/articles/10414-the-roi-of-safety)



Photos from left, clockwise: CMSgt Joshua Franklin is presented with a certificate of retirement from Col (ret) Jennifer Barrett at a ceremony on August 2, 2018 at the Air Force Safety Center, Kirtland AFB, New Mexico. In his last assignment, Franklin served as the Career Field Manager for Air Force Safety where he led, managed, allocated and monitored over 781 1SOX1 Air Force Specialty Code authorizations worldwide. He formulated the enlisted specialty description and minimum qualification standards, established training and resource requirements, resolved career field utilization and training issues, and developed safety enlisted development processes.

CMSgt Sydney Parker and Chris Davis, AMC Occupational Safety, present Franklin with a personalized cover of *The Mobility Forum* prior to his retirement ceremony.

Franklin with his fellow 1SO Safety CMSgt's at his retirement ceremony.

Photos by Ms. Kim Knight

# Is My Story ASAP Worthy?

## Mobility Air Forces ASAP Submission Guidance



BY MSGT ROBERT “GIFF” BOSCHÉ, AMC OPS RAMS

In our discussions with Mobility Airmen from across the globe over the last couple of years, we have fielded many questions about what qualifiers make an event worthy of an ASAP submission. These questions often come up during our quarterly OpsRAMS instructor orientation.

As you can well imagine, a classroom full of experienced Mobility Air Force (MAF) instructors and evaluators talking flight safety offers a seemingly inexhaustible catalog of “There I was ...” aviation tales. These stories run the gamut from experiencing systems failures no one had ever heard of before and for which no checklist existed, to making a simple error that only by pure chance didn’t kill someone, to being threatened with being shot down by a foreign air traffic controller while oceanic in international airspace.

Each of these stories presents untold opportunities for lessons learned not just for the crew involved at debrief or around the room at a squadron hangar fly, but also for the entire MAF community! As proactive safety professionals, of course, we’re spring loaded to ask, “Did you consider filing

an ASAP?” More often than not, the answer is no, and the reason given most often is along the lines of “I didn’t think that was an ASAP.”

This is a fair answer and one that has been on our minds as we continuously work to enhance awareness and understanding of ASAP and maximize its value to Mobility Airmen. If you’ve read one or more of our articles in *The Mobility Forum* or in our OpsRAMS newsletter, you’ve likely heard us suggest that while not every unusual event or hazard qualifies as a safety report, nearly every unusual event or hazard presents an opportunity for hazard mitigation and safety enhancement. This sentiment is right in line with guidance straight out of AMCI 10-502 *OpsRAMS*:

*ASAP is designed for Airmen to report information and concepts critical to resolving mishap precursors, and the sharing of this information across AF aviation communities...to reduce mishaps through operational, logistic, maintenance, training, and procedural enhancements.*

The ASAP program and your AMC OpsRAMS staff, with the oversight of the AMC Deputy Commander, are your

**In the simplest terms and with few exceptions, an ASAP can be any error, observed hazard, or unsafe situation that—in the opinion of the front line Airman (i.e., YOU)—compromises the safety or security of people or resources.**

direct link to our vast cross-command, cross-functional network of MAJCOM staff and subject matter experts who have the means to address challenges to operational safety and efficiency across the mobility enterprise.

Still wondering what is ASAP worthy? In the simplest terms and with few exceptions, an ASAP can be any error, observed hazard, or unsafe situation that—in the opinion of the front line Airman (i.e., YOU)—compromises the safety or security of people or resources. While this casts a wide net, we’d like to offer the following list of reasons to submit an ASAP report. This list is part of a guide a major domestic airline distributes to its own aircrews; it was shared with us by a reservist on the AMC staff. It is not exhaustive but it does show the vast diversity of events the airline feels are important

**AVIATION EVENTS RECOMMENDED FOR ASAP SUBMISSION**

Aircraft accident /incident	Engine failure or shutdown	Passenger misconduct
Aircraft damage	Evacuation	Mechanical failure (significant)
Aircraft damage on ground	Fire in-flight	Minimum fuel declaration
Altimeter anomalies	Flap or airframe overspeed	Near midair collision (TCAS RA)
Altitude deviation	Flight control malfunction	Overweight landing
Assessment of precipitation intensity	FMS database problem or anomaly	Refusal of aircraft-mechanical condition
ATC issues (go around, clearance error)	Food poisoning	Rejected TO
Avionics failure	Fuel dumping	Runway or taxiway incursions
Cabin pressurization problem	Fuel issues or irregularities	Runway or taxiway excursion
CPDLC failure/malfunction	Gross error report/alt or nav (int'l)	Security breach (no classified reports)
Damage to property	Hazmat incident, irregularity, or emergency	Severe icing
Deviation (inadvertent) from procedure	Human trafficking suspicion	Smoke/fumes in cabin/cockpit
Diversion (weather or other)	Hydraulic system failure	Takeoff/landing wrong surface
EFB issue/failure	Laser event	Turbulence (severe or resulting in injury)
Electromagnetic interference	Lateral deviation or navigation error	Unsuccessful RNAV (RNP) approach
Electrical system failure	Lightning strike or static discharge	Volcanic ash encounter
Emergency PIC authority exercised	Loss of separation with/without TCAS RA	Wind shear encounter (LLWS)

for its crews to identify and share across the company. Remember, while this specific list is aircrew-centric, benchmark ASAP programs at today’s airlines cover nearly every airline employee from flight crew to dispatch to maintenance. The Air Force Aviation Safety Action Program is for ALL AIRMEN in all specialties.

Still in doubt? Just submit it! The OpsRAMS staff’s dedicated ASAP

analysts will take care of the rest. As stated, and in accordance with paragraph 4.5 of the OpsRAMS operating instruction, there are a few conditions under which an ASAP may be excluded, such as criminal acts, substance abuse, intentional falsification, and intentional disregard for safety or security concerns. That being said, in the nine-year history of the program, AMC has never

rejected an ASAP. Our analysts work diligently to redact personally identifying or potentially sensitive information while retaining your valuable lessons learned.

One of the great advantages we enjoy and celebrate in our MAF community is a rich diversity and depth of experience in our Airmen. Don’t let it go to waste. Share your experiences with ASAP today! 



# Aviation Safety Action Program (ASAP) Reports: Why Should I File One?

BY MR. BILL KROUSE, AMC OPS RAMS

Today's aircrews grew up in a "why" society. Why should I do this? Why is this important? Why should I care? It is not surprising; people are bombarded daily by social, visual, and audio media at an unprecedented level with information that often conflicts, frequently directs a change in behavior, or requires additional effort to comply. Pure survival skills dictate the need to question, verify, and interpret everything.

This article provides verifiable evidence on multiple levels for WHY having an active ASAP program to proactively report actual as well as potential safety issues and/or concerns is beneficial to the U.S. Air Force. The success already achieved by the current program, operating at such a low power setting, is amazing. Who knows what can be achieved when the throttle is pushed to the firewall!

First, an active ASAP program will provide leadership, trainers, and aircrews with an aggregate view of issues affecting the safe and efficient execution of the mission. For example, of the 3,200+ ASAPs submitted, 13.4 percent were related to altitude deviations. Add the number of ASAPs related to navigation errors and the rate jumps to 19.7 percent. These ASAPs show a fairly even mix of automation errors, communication breakdowns between crew members and ATC, task saturations, and poor CRM/TEM skills.

**The real bonus of an active ASAP program is that issues are quickly addressed!**

This flight analysis highlights areas to monitor for leadership, provides trainers with the "meat" to emphasize the importance of why certain techniques are used to mitigate specific threats, and enables aircrews to not only "chair fly" specific mission profiles but also consider how they would address the threats the ASAP submitters encountered. None of these benefits are available if aircrews don't submit ASAPs.

An active ASAP program enriches the search tool incorporated in the ASAP software to allow an individual to search for and likely find numerous ASAPs about a specific event, location, or MDS. For example, your mission is scheduled for an ERO so you search the ASAP database and find 23 related ASAPs. Perhaps, if your mission is planned for a "quick turn" through Charleston AFB, you find there are 72 ASAPs in the system related to activities at Charleston. Finally, maybe you are a new C-21 crew member; you search the ASAP database for MDS



specific issues and find 71 ASAPs associated with the C-21.

The real bonus of an active ASAP program is that issues are quickly addressed! AMC has dedicated resources—the Ops RAMS branch—with the mandate to review each ASAP submission by the next working day. After redacting all information that may identify the submitter, the submission goes to the appropriate agency on the staff responsible for that area of operations. The Ops RAMS branch continues monitoring each submission, tracking it through the staff and developing a coordinated response to post on the AFSAS scoreboard. Because there are times the Ops RAMS branch needs to contact the submitter to ensure the staff understands the issue (and not for punitive reasons), providing your contact information is recommended.

While some issues are tracked for trending purposes, many result in actionable changes that aircrews can see.

**EXAMPLE 1**

With the number of lithium-ion battery fires on civilian airlines increasing, an ASAP submission questioned when the AMC staff would address this hazard. The staff totally agreed with the submitter's concern and jumped on getting fire-suppression bags out to the field. In the rush to make this equipment distribution happen, the bags were deployed before the checklist and instructions were developed. A subsequent ASAP highlighted this fault, which prompted AMC A3 and A4 staff to initiate the development of usage instructions, storage responsibilities, and product ownership validation.

## The ASAP program provides the submitter with instant access to individuals who can fix the issue.

ASAPs have highlighted many unsafe practices, inefficient techniques, and issues previously unknown to leadership. ASAPs have highlighted MDS specific issues, such as:

- SATCOM linkage failures in the C-5M: Resulted in a Working Group to track and mitigate.
- Faulty C-17 fuel probes: Prompted a Crisis Action Team to evaluate the extent of the issue and develop interim procedures to use until a fix can be developed.
- C-130J weight and balance issue: Resulted in a Combat Offload Method B that highlighted the manufacturer improperly transferred the weight and balance charts from the C-130H to the C-130J instead of creating a new weight and balance charge to account for the extra pallet position in the C-130J.

**EXAMPLE 2**

Another ASAP submission involved a C-17 passing through Yokota AB on the Diego Channel mission. Yokota Airfield Management consistently assigns C-17s to parking spot C7 or C9. Per the Giant Report, the weight bearing capacity (WBC) of those two parking spots is 197,000 pounds. The problem is that particular C-17 channel normally arrives around 350,000 pounds and departs at 480,000 to 550,000 pounds. With only an airfield manager's waiver, limited by regulation to a 50 percent increase of the reported WBC, the aircrew was concerned for the safety of the aircraft. Because of the ASAP, AMC Airfield Management worked with PACAF and the Yokota airfield manager to investigate this submission. Initial recommendations from the Civil Engineering assessment were to replace the existing concrete slabs with new 18" slabs to meet appropriate WBC requirements. Until then, C-17s will not utilize these spots.

In addition, ASAPs have identified safety issues specific to a single location, like the lack of RCR knowledge by the Navy tower controllers at Lakehurst NAS, the incorrect taxi-line issue at Kandahar, and the "Dips" issues in Scottish airspace.


The ASAP program provides the submitter with instant access to individuals who can fix the issue. It also provides fellow aircrews with real-life examples of mistakes and the events that led to error, arming them with knowledge and tools to help avoid similar errors. The potential power of the ASAP program is incredible, and the move to incorporate the ASAP program into the AFSAS safety system will allow searching both the mishap and ASAP databases.

The upgrade of the ASAP program to a mobile app, scheduled for a 2018 release, will allow aircrews to draft

**EXAMPLE 3**

This final example highlights the complexity of airlift missions and why aircrews need to keep their head in the game. An aircrew landed at its en route cargo pickup location to find the cargo was double what they expected, forcing a reduction in the Block 10 fuel load to enable the aircraft to take off. The aircrew also had weather in Europe that did not allow for a legal second alternate. TACC directed the aircrew to take off with the decreased Block 10 fuel load and to divert to its planned alternate if unable to make up the 6,000-pound fuel reduction. Feeling pressured to launch and with little chance of making up the missing fuel, the aircrew declared "safety of flight" and terminated missions for the day. The Ops RAMS branch promptly contacted the TACC and found poor internal communication between the DO, Senior, and Flight Manager led to the aircrew perceiving that the Senior was directing the aircrew to take off without a legitimate destination (i.e., insufficient fuel) and alternate. The intended directions were to have the aircrew work with the Flight Manager to obtain a legal alternate, update weather en route, and make a final decision on whether it would be safer to divert to a legal alternate. This ASAP allowed the TACC to review its mission execution processes to ensure miscommunication on this level does not occur again.

their ASAP submissions on their smart devices and tablets (EFBs) at any time, in any location, without a live network connection and then submit them later when they have connectivity.

The future of the ASAP program relies on aircrews highlighting safety issues and errors. The benefits mentioned here are just a small sample of the potential "Safety Bonanza" waiting to be unleashed. Put your fears away and get into the game. Like the famous WWII Uncle Sam poster read: "We Need Your ASAP!" 



G-BJRT, the aircraft involved in the Flight 5390 accident.

Photo by Rob Hodgkins

# Mishaps with a Moral

BY MAJ JONATHAN R.N.K. WEAVER,  
HQ AMC FLIGHT SAFETY

## MIRACLE OF BA FLIGHT 5390

On June 10, 1990, a British Airways BAC 111 with 81 passengers and six crew members experienced an explosive decompression when the pilot's side windscreen blew out and sucked the captain partly out of the window. A quick acting flight attendant managed to grab the captain before he completely departed the aircraft, and the copilot managed to safely recover the aircraft to an emergency landing. Luckily, everyone aboard—even the captain—survived the ordeal with only minor injuries. It was later found that the pilot's windscreen had been improperly installed on the aircraft the night before the accident, and the pilot had loosened his harness even though both pilots' seatbelts were fastened.

**MORAL:** A founding father of military aviation, Major General Benjamin

D. Foulois designed the “airplane seatbelt” with inspiration from leather riding saddles. While the Wright Brothers made their first historic flight in 1903, it would be nearly eight years before then-Lieutenant Foulois would add the lifesaving item to the minimum equipment list of military aircraft. In the interim, Lieutenant Thomas Selfridge was killed in 1908 when he and Orville Wright crashed in the 1908 Wright Military Flyer. The addition of the safety belt by Lt Foulois likely saved countless lives in aviation and—through its proper application—will continue to save more. All AMC assets have guidance that directs the usage of seat belts while occupying a duty position but allow for some leeway in the use of the shoulder harness when not in a critical phase of flight. While the removal of a shoulder harness may be more comfortable at cruise, so is remaining within a cockpit after an explosive decompression.





Concorde F-BTSC, the aircraft involved in the July 25, 2000 mishap, seen at Charles de Gaulle Airport in 1985.

Photo by Michel Gilliland

**When we rush to complete tasks or deviate from flight manuals and technical orders, we induce human error into an already complex situation.**

### CONCORDE MISHAP

On July 25, 2000, one of the most complex aircraft ever designed was destroyed by a small strip of metal debris. Air France 4590, a Concorde supersonic jet transport, was catastrophically destroyed, impacting the ground outside Paris, France, and killing all 109 people on board, as well as four individuals on the ground. As determined by the accident investigation board, the aircraft struck a metal strip that had fallen from a Continental Airlines DC-10 that took off only a few minutes before the Concorde. The metal strip, found to be a titanium alloy, sliced into Concorde's tire, causing it to explode and send fragments into the underbelly of the aircraft, immediately rupturing and

igniting its pressurized fuel tanks. Investigators also determined that the metal strip was improperly manufactured and improperly installed by a rushed mechanic.

**MORAL:** Foreign object debris, or FOD, is always a great risk to aircraft. When we rush to complete tasks or deviate from flight manuals and technical orders, we induce human error into an already complex situation. While the choices we make might not affect our own aircraft or the outcome of our mission, this is a clear example of the "domino effect" and how our choices can have dire consequences for others.

Stay safe, my friends! 🛩️




Back row left to right: Maj Jon Weaver, AMC Flight Safety; David Miller, AMC Deputy Director of Safety; Maj Josh Miller, AMC Flight Safety; Steve Panger, AMC Flight Safety; Kevin Sluss, AMC Flight Safety; Tim Grosz, AMC Ops RAMS; and Lalo Maynes, AMC Flight Safety. Front row left to right: Lt Gen (ret) Doug Owens; Gen Carlton Everhart II, AMC Commander; Col Brandon Hileman, AMC Director of Safety; and CMSgt Larry Williams, AMC Command Chief.

## AMC Wins Foulois Award for Outstanding Safety Program Again

**A**ir Mobility Command received the Major General Benjamin D. Foulois Memorial Award for its stellar aviation safety program. AMC/SEF accepted this award on April 26 during the PHOENIX Rally at Scott Air Force Base.

“This was a well-deserved achievement!” said Maj Gen John T. Rauch Jr., Air Force Chief of Safety and Commander of the Air Force Safety Center. “Air Mobility Command celebrates another first-rate safety record as a result of its outstanding aviation safety program. Preventing mishaps is a team effort. The sustained commitment of safety personnel, continued leadership

support, and involvement of the Airmen and aircrew who accomplish the Air Force mission every day make this possible.”

The Daedalians National Organization presents the Foulois award annually at the Daedalian National Convention to recognize flight safety in all areas of military aviation. The group’s objectives include encouraging and recognizing flight safety and weapons development, as well as recognizing exceptional performance by military aviators. This year marks the 80th year of the award, which began in 1938. AMC won the award in 2017, as well as in 2011 and other prior years. 



# 100 Years of Mobility Airlift

BY MS. ERIN LASLEY, AMC HISTORY OFFICE

The year 2018 can be termed the year of the anniversaries. One hundred years ago, the carnage of World War I drew to a close. Fifty years ago, in 1968, the Tet Offensive ramped up hostilities during the Vietnam War, and 25 years ago, in October 1993, U.S. Army Rangers and Delta Forces strived to bring peace to Mogadishu, Somalia. In the same year, Nelson Mandela was awarded the Nobel Peace Prize for his part in ending apartheid in South Africa. Through the ups and downs of the last century, air mobility forces have played a key role in the world's struggles and unity.

On September 7, 1918, as war raged in Europe, 18 American soldiers arrived at an airfield in Chanute, Illinois, not too far away from where Air Mobility Command headquarters now resides. Some of the soldiers may have looked at the airplanes waiting for them with trepidation, while some adrenaline junkies may have looked at the planes with excitement and glee. One thing was for sure: they were all going up for a ride that day.

It took several aircraft to transport the 18 soldiers roughly 16 miles from Chanute Field to Champaign, Illinois, but it was the first recorded American demonstration of troop transport by air and the start of mobility airlift.

A month later on October 3, mobility forces were called upon again, but this time in Europe and under heavy fire. Nine companies of the U.S. Army's 77th Division became surrounded by German forces in the Argonne Forest and were running low on supplies and food. Fending off German attacks and even Allied bombing, the 77th released carrier pigeons with messages requesting help and, unfortunately, faulty coordinates.

Airmen from the 50th Aero Squadron were sent out in DH-4s to search for the 77th and drop much-needed supplies, but with the wrong coordinates, the

## AMC HISTORY OFFICE MISSION

Preserve Air Mobility Command's corporate memory by collecting, evaluating, and interpreting information and artifacts which offer historical perspectives for planners and decision-makers. Establishes policy and administers the command's history, museum, and art programs; produces periodic historical reports and studies; and answers historical information requests. In addition, promotes the education of Airmen and the public on the importance of air mobility heritage through the dissemination and display of historical information and artifacts.

Goettler and Bleckey's DH-4







C-47 tow gliders over Normandy during D-Day operations.

Airmen dropped supplies in German trenches and the 50th suffered casualties from German artillery. A pilot with the 50th, 1Lt Harold E. Goettler, and his spotter, 2Lt Erwin R. Bleckley, went out twice searching for the 77th. On their second run, the pair narrowed down the 77th's location, but both men were fatally injured during the rescue attempt and Goettler crash landed his plane close enough to Allied lines to relay their findings before he died. The 77th was finally rescued on October 8 after laying out markers for pilots to see. Both Goettler and Bleckley received the Medal of Honor and the 77th became known as the Lost Battalion.

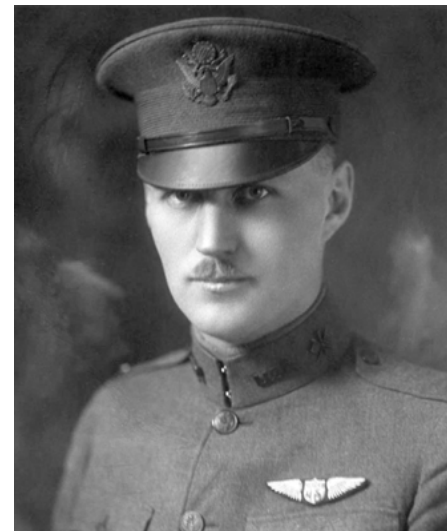
After the war, mobility forces fell to the wayside as the Army concentrated its flying efforts on using aircraft to destroy sea vessels and bomb strategic military targets rather than developing airlift technology and practices. However, by June 1922, the Army Air Service began Model Airways, a program sponsored by the government to airlift passengers and materials within the United States.

Model Airways began a flight service between Bolling Field, Washington, D.C., and McCook Field in Dayton, Ohio, and soon expanded its services to other airfields in the

Midwest—including Scott Field. Between 1922 and 1926, Model Airways flew over 1.2 million miles and transported over 1,200 passengers and 62,000 pounds of cargo. Though by today's standards Model Airways' numbers seem paltry, the Army Air Service was still operating two-seater DH-4 bi-planes to deliver passengers and cargo. Model Airways disbanded in 1926 after the Air Commerce Act barred government agencies from aviation business that private enterprises could provide.

As the United States developed into a more isolationist country in the 1920s and the budget for the military was slashed, the Army Air Corps moved a vast number of its combat aircraft to the coasts for defensive measures. However, in the event of an emergency, these units could not wait for their support elements to travel by rail or road. It was imperative that they arrive quickly by air.

In 1928, the Army Air Corps demonstrated its airlift capabilities by staging an exhibition. Using 14 bombers, the Air Corps airlifted 73,721 pounds of cargo and personnel. Later in 1930, Maj Henry H. "Hap" Arnold led an exercise that airlifted 36,548 pounds of cargo using a Douglas



1st Lieutenant Harold E. Goettler, 50th Aero Squadron

C-1, three Fokker C-2As, and a Keystone LB-7 in 36 missions. Other exhibitions and exercises followed and demonstrated the Air Corps' ability to sustain its units by air—an obvious conclusion in today's world.

During the 1930s, those devoted to air transportation continued to strive to prove the potential of airlift mobility. Though Maj Hugh J. Knerr was given permission by Chief of the Air Corps, Maj Gen Benjamin D. Foulois, to form the 1st Air Transportation Group under the Air Corps Materiel Division in 1932, most of the funding went towards combat aircraft. When Brig Gen Hap Arnold requested funds to purchase more transport aircraft in 1938, the Secretary of War denied his request simply because the secretary thought the planes were too expensive. He instead pushed the Army Air Corps to convert old bombers into transport planes and then used the money saved to purchase new B-18 bombers, which were unpopular among aircrews.

To prove airlift's worthiness, Brig Gen Delos C. Emmons oversaw an airlift exercise in 1938 that transported 42 planes and 945 men from airfields in California to unfamiliar airfields in New England. He used 16 converted bombers and took eight trips to

transport all the passengers and, with war looming in Europe, senior leaders in the Air Corps noticed the rapid mobility exercise and the ability to transport soldiers by air quickly.

Once the war did flare up, airlift was split into two camps in November 1942: the Air Transport Command (ATC) and the Troop Carrier Command. While ATC was responsible for ferrying military aircraft within and outside the United States and transporting War Department materiel, mail, and personnel (excluding troop carrier units), the Troop Carrier Command airlifted combat forces into the heat of battle.

During WWII, both the ATC and Troop Carrier Command more than proved their worthiness to the war effort. For ATC, nowhere was this more evident than the treacherous route over the Himalayan Mountains known as The Hump. After the Japanese blocked the Burma Road in 1942, Allied planners needed another route to resupply the Chinese army with much-needed war materials and humanitarian aid. The 10th Air Force and the ATC repaired and created airfields in India and China, contributing to the defeat of the Empire of Japan. In October 1942, ATC was given responsibility of the China-Burma-India airlift over The Hump and flew

**In April 1945, troop carrier planes flew over 16,000 sorties, most in combat zones, and evacuated over 35,000 wounded from the battlefield in Europe.**

an average of 10,000 tons of supplies into China every month. By the time Brig Gen William H. Tunner took over command in 1944, ATC aircraft were transporting 30,000 to 65,000 tons of supplies a month to war-weary China.

While ATC was transporting vital war materiel and passengers around the world, the Troop Carrier Command was taking part in some of the most historic battles of the war. On the night of June 5 and the early morning of June 6, 1944, the IX Troop Carrier Command transported paratroopers of the 82d and 101st Airborne Divisions into battle. In those dark hours, thousands of Army paratroopers jumped out of approximately 1,000 C-47s, gliders, and other aircraft over Normandy, France, beginning Operation Overlord. A few months later on September 17, the Troop Carrier Command carried out a larger operation known as Market Garden. Over 2,000 C-47s, gliders, and other aircraft dropped over 20,000 men—as well as artillery, vehicles, and equipment—into Holland.

In April 1945, troop carrier planes flew over 16,000 sorties, most in combat

zones, and evacuated over 35,000 wounded from the battlefield in Europe. Aircraft in the IX Carrier Command delivered over 44 million tons of freight and nearly 8 million gallons of gasoline to the European front during that same month.

By 1948, the ATC and the Naval Air Transport became the Military Air Transport Service (MATS), which would be the responsible organization for all strategic airlift operations. Barely a month later, MATS would face its first challenge in Germany after Soviet forces blockaded Berlin from the rest of the world and then built its forces back up during the Korean War.

Through the Korean War and the beginning of the Vietnam conflict, the MATS mission evolved from a strategic airlift operation to a strategic combat airlift operation. In January 1966, MATS was redesignated the Military Airlift Command (MAC); in 1974 and 1975, both strategic and tactical airlift were consolidated under MAC. By June 1992, MAC and the Strategic Air Command were inactivated and mission elements of both were formed into Air Mobility Command (AMC). This new organization revolutionized rapid global mobility by combining airlift, air refueling, and aeromedical evacuation.

U.S. military airlift started in a small field in rural Illinois ferrying a few soldiers to a nearby town, and grew through the fire of war to repel the advancement of aggression. Today, AMC employs airlift not only as a war fighting tool, but also as a humanitarian resource that brings aid and hope to millions around the world impacted by devastation. 🇺🇸



A C-130 sits on the runway at an air base in Vietnam.





USAF photo by J.M. Eddins Jr.

# Providing Emergency Patient Care ... at Altitude

BY MS. KIM KNIGHT, STAFF WRITER

**A**eromedical evacuation (AE) can be unpredictable. No two patients have identical symptoms and no two flights are the same, which means medical personnel have to prepare for a wide variety of scenarios in various planes. That is precisely the type of training they get at the U.S. Air Force School of Aerospace Medicine (USAFSAM) at Wright-Patterson Air Force Base in Ohio. TSgt Anthony Shuty, Aeromedical Evacuation Technician Instructor, described the process.

“At USAFSAM, we train flight nurses, flight medics, and flight surgeons learning to clear patients for flight,” he

said. “They review movement requests and conduct a pre-triage of sorts. After considering the treatments and status, as well as potential flight stress based on the diagnoses and condition, they determine whether a person is stable for flight.”

Shuty said there are AFIs, regulations, and protocols for dealing with patients, but there isn’t always a doctor on board. Thus, training must ensure that Aeromedical Evacuation Technicians can work independently, regardless of in-flight conditions.

“When they come to Wright-Patterson,” he explained, “our students are already

experienced nurses and technicians trained in basic life support and advanced cardiac life support. We simply apply the stresses that may be encountered in flight to the medical care they are already familiar with providing. For example, we show them how to perform in places where the environment is not controlled like it is in a hospital, such as an area with little or no light or with changing conditions.”

According to Shuty, students gain qualification at the AEIQ (Aeromedical Evacuation Initial Qualification Course) after graduation from USAFSAM FN/AET course. AEIQ is the second part of the training pipeline



for AE. They gain this experience because at Wright-Patterson, training occurs on actual C-130, C-17, and KC-135 fuselages that were operational previously. This helps ensure that when students get on those aircraft, things like the electrical and the oxygen ports are the same and they are comfortable with the layout.

The fuselage simulators do not move, but everything inside is functional. In fact, even the mannequins (which Shuty refers to as patients) are unusually realistic.

“We can assess the pupils on some of the new mannequins, making them dilate and contract,” he said. “Also, we can make patients respond appropriately to events such as a drug overdose, for example. They can seize and start shaking, and their face turns blue, as if not receiving oxygen. Our simulation operators can fit them with stumps of limbs to mimic amputations and they can bleed, which we control through real-life treatments. We can control the rise and fall of their chest to assess our CPR efforts.” Staff can even make the faux patients speak, sweat, and cry.

After graduation from USAFSAM, AEIQ incorporates aircraft emergencies such as simulated crash landing and ditching using colored lights and sounds. They play actual engine sounds so loudly that trainees must wear headsets and ear protection, as well as consider those for the patients. They simulate fires on the aircraft—including fire alarms, smoke, and extinguishers—forcing crews to react appropriately.

“These medical professionals are great at what they do,” Shuty continued, “but we put them into a new environment that is extremely realistic. They have oxygen masks and tanks like in a genuine airplane. They can see how fast they use their oxygen and then have to figure out how to refill it, all while there is a fire in the airplane.



USAF photo by J.M. Eddins Jr.



Attendees at USAFSAM receive flight nurse training in advanced C-17 and C-130 simulators at the 711th Human Performance Wing's U.S. Air Force School of Aerospace Medicine at Wright Patterson AFB, Ohio.

USAF photo by J.M. Eddins Jr.




Adding layers to the simulation gets their adrenaline going, and it is interesting for us and for them to see how they respond under stress.”

TSgt Shuty added that instructors always include a strong emphasis on safety because conditions such as those presented sometimes cause tunnel vision or task saturation in real life, causing people to forget about safety. From day one, he said training involves crew resource management—teaching students to look out for each other and keep patient safety and crew safety front and center, no matter what happens.

“They are taught communication techniques, too,” he said, “where crew members step in to ask if they want to give this medication, deliver shock, check a pulse—things like that. So they are always communicating, keeping each other on task and giving appropriate treatments. Without a doubt, this hands-on training prepares attendees for real-life scenarios. Our aircraft simulators have the same equipment students will see in their squadrons, and we train for scenarios using the same checklist they will use when responding to actual emergencies. We teach them skills they will need throughout their career.”

In addition to aeromedical evacuation, the facility trains critical care air transport teams. Shuty said USAFSAM acquired a Black Hawk recently and will get an Osprey, as well, and hopes to bring in other branches of service for joint training.

“We want to be the center of excellence for all en route care training,” he concluded. With about 6,000 Department of Defense, international, and civilian students attending annually, it is well on its way to becoming just that. 



USAF photo by J.M. Eddins Jr.



TSgt Ronald RoAwe, 621 CRW, facilitates transport of USAID food and provisions for Hurricane Matthew victims in Haiti.

USAF photo by SSgt Robert Waggoner



SSgt Angelo Morino, 621 CRW, distributes food and provisions to Hurricane Matthew victims in Port-au-Prince, Haiti.

USAF photo by SSgt Robert Waggoner

## Col Leslie Maher Recaps Being on the Front Lines of Hurricanes Matthew and Maria

BY MS. KIM KNIGHT, STAFF WRITER

**H**urricane season, which officially runs from June 1 to November 30, ends soon. Most who have served on the “front lines” of hurricane relief say it is something they will always remember. Indeed, it is the favorite part of Col Leslie A. Maher’s career, which started 30-plus years ago in aircraft maintenance and currently finds her commanding the 375th Air Mobility Wing at Scott Air Force Base. The in-between years included training or serving across America and internationally.

Of all her assignments—including one as military liaison between the United States and Japan—her favorite was leading hurricane relief teams as the deputy and commander of the 621st Contingency Response Group, specifically after Hurricane Matthew

hit Haiti in 2016 and Hurricane Maria devastated Puerto Rico in 2017.

“It is the most gratifying work,” Maher recalled. “I love doing whatever the military sends me to do, but I felt honored to be part of a team that helped fellow Americans in Puerto Rico after Maria. It was also an honor to assist in Haiti, as we have tried so hard to get them out of the red since their big earthquake in 2010.”

Delivering food to victims and making sure they received medical care came with great danger in Haiti. For starters, air traffic was somewhat of a nightmare. The international airport there, which was a makeshift refugee camp during the earthquake six years before, had only eight gates. Plus, it is a foreign country, so U.S. military couldn’t just barge in and take over the airspace and the

airport—even to help. Instead, it was important to work with the citizens as they worked to help themselves.

“We brought in helicopters that included MB-22s, HH-53s, CH-47s, and HH-60s,” Maher explained. “Plus, we needed to let commercial flights continue to help evacuation efforts or deliver supplies, and that often meant 747s.”

The skies buzzed with Marines, Navy, Army, and Air Force traffic, as well as Coast Guard, Ministry Of Defense, United Nations, the media, and more. Maher said the airport went from 20-30 operations a day to well over 200 a day and juggling all of the 747s, C-17s, and helicopters was tricky. The Haitians were in charge, and her airfield operations officer was the go-between for multiple organizations. One was the air traffic control tower, which she described as a “temporary” FEMA





A1C Brandon Gray, a vehicle operator with the 6th Logistics Readiness Squadron, signals a tractor trailer on MacDill AFB, Fla., in October 2017. The 6th LRS transported 249,636 pounds of cargo and 2,034 air crew members on 107 requests in support of the Hurricane Maria relief effort.

USAF photo by A1C Scott C. Warner

Winnebago full of old equipment and placed atop a building after the 2010 earthquake. Another agency controlled ground movement at the airport, and there was an airfield manager.

“When possible, we put safety observers with the Haitian agencies,” she said. “They were very receptive and didn’t shut us out if we stayed humble and modest. I was thankful my team had the right personalities for the situation. During one especially close call, we were trying to get a commercial airliner out to make room for a 747, and I had a C-17 holding that was bringing in more military. Meanwhile, two helicopters needed in because they had delivered supplies and were low on fuel, and six other helicopters were attempting to get in. It was kind of like a 3D chess game, and sometimes the Haitians didn’t see a situation developing because their eye was on a different chess piece.”

Maher admits that she doesn’t know exactly how close it was that day, but she knew the helicopters with low fuel urgently needed to be on the ground, where they would refuel, load more supplies, and go again.

Air traffic wasn’t the only danger. Crews also had to be vigilant as they delivered supplies. Fuel was tight for the choppers, which were left running while being offloaded because people were hungry and—despite being thankful for the help—not everybody was going to get a bag of rice each time a helicopter landed. Fights were an ongoing possibility, as was the potential for gangs to rush the craft.

“During one delivery,” explained Maher, “the crew locked arms to form a human gate around the helicopter because they were afraid citizens would get caught in the rotor. Those heroes probably saved at least a dozen lives by keeping people back that day. They were only trying to get food. But one person running into a rotor would have stopped critical relief efforts, even with water shortages and the spread of cholera looming.”

Language was a bit of a barrier, as well. Maher was grateful for Mobility Support Advisory Squadrons, whom she described as “working their tails off” while there, and for U.S. Southern Command (SOUTHCOM in Florida), which helped her work through many diplomatic and safety issues.



Col Leslie Maher

“We were there 18 days, and it was amazing to work with all those agencies and see supplies get to where people needed them,” she concluded.

Col Maher has been in her current capacity as the 375 AMW/CC at Scott since February 2018. Her associates over the years have described her as tough but compassionate; qualities that have served her well. We suspect her team members in Haiti and Puerto Rico would agree, as would the citizens on the receiving end of those relief efforts. 🇺🇸



A KC-10 Extender with 76 ARS, 514 AMW, moves in to be refueled by a KC-10 crewed by Reserve Citizen Airmen with 78 ARS, 514 AMW, over the Atlantic Ocean.

USAF photo by MSgt Mark C. Olsen

# Flying with Gremlins

BY TSGT NATHANIEL HARRIS, 6 ARS/DOF

They weren't bad omens, necessarily, but there were definite signs that this flight wasn't going to be a typical combat sortie. It began four hours before take-off, when the alert included information about potentially nasty weather. My crew and I grabbed our essentials plus whatever we'd need in case we couldn't get back to base.

Our mission is fuel. The four of us—two pilots, a flight engineer (that's me), and a boom operator—operate the KC-10 Extender, which provides air refueling capabilities to U.S. and coalition forces throughout the Middle East. During air refueling, the "boom" sits in the back of the airplane in a small room beneath the floor. From there, he oversees the transfer of jet fuel to 6-inch receptacles, 50 feet away while we are thousands of feet up at speeds that often exceed 500 mph.

The first surprise that night was learning that when I adjusted my seat position electrically, it caused the PITOT HEAT INOP light to illuminate. This was odd because there is no correlation between my chair and the light. Plus, each time it happened, the MASTER CAUTION light came on, causing us an unnecessary distraction.

Another gremlin appeared during preflight inspection when I depowered the aircraft's hydraulic pumps. As the pressure dropped to zero in the hydraulic systems, we lost all backlighting for the center pedestal switches and all circuit breaker panels in the cockpit. I manipulated the rheostat controls, but nothing restored the backlights for the upcoming night mission in combat. This was disconcerting.

Then, as the pilots prepared for departure, the aircraft suddenly went

dark. My panel indicated we lost electrical power from the ground power unit. We requested a new one and were back up and running quickly, but the jet turned off again.

"What is going on?" I demanded of anyone within earshot but no one in particular. It was as if the jet was determined not to fly. We ultimately decided to power the electrical systems with the onboard generator of the auxiliary power unit. There was nothing hazardous per se with the idiosyncrasies of this particular jet, but we all agreed there were definitely electrical gremlins. Still, we needed to accomplish this mission.

As we climbed into the black void of the moonless night sky, our boom tapped me on the shoulder and pointed out that a fuel quantity gauge for one of our six tanks was blank! Normally, this wouldn't be critical, but that forward tank serves as ballast to maintain a safe center of gravity



(CG), so we keep at least 15,000 pounds of fuel in it. The quantity indicator for that forward tank, which reassuringly displayed 45,000 pounds prior to takeoff minutes earlier, was now mute. I knew the fuel was there and if I left it there, we could maintain a safe CG, but there were three problems with this.

First, I didn't know *exactly* how much fuel we had. Second, I wouldn't know *precisely* where in the CG envelope we were. Finally, leaving 45,000 pounds of fuel in the forward tank would make it unavailable to our receivers and to us—limiting support to those on the ground. That, after all, was the whole reason we were there.

I was determined to solve the issue. I couldn't transfer or offload part of the 45,000 pounds because—well, it doesn't work like that on aircraft. Fuel transfers under pressure through manifolds hundreds of feet long and through many valves, some of which aren't always airtight. So I couldn't rely on the tank gauges to know exactly how much was moving. I would have to move all of it at once, which meant we had to offload/burn much of the other tanks to make room for the fuel in the forward.

First, I would have to empty the aft tank. But would doing so exceed the forward limit of the CG envelope? I began studying my “Ouija board”—a graph with plots and overlays that represents the six fuel tanks and helps the flight engineer determine a precise CG. The chart revealed I could burn (or offload) all aft fuel and make enough room in our wing tanks and center tank for the forward fuel.


The aircraft commander was understandably hesitant, asking, “Don't we need fuel in the forward tank for ballast?”

“We need fuel for ballast, sir, but it doesn't have to be in the forward tank,” I explained. “The center tank is also forward of the CG, so I can keep fuel there for ballast.” After further discussion, the pilots agreed and I turned on the pumps in the forward tank for the first time that night.

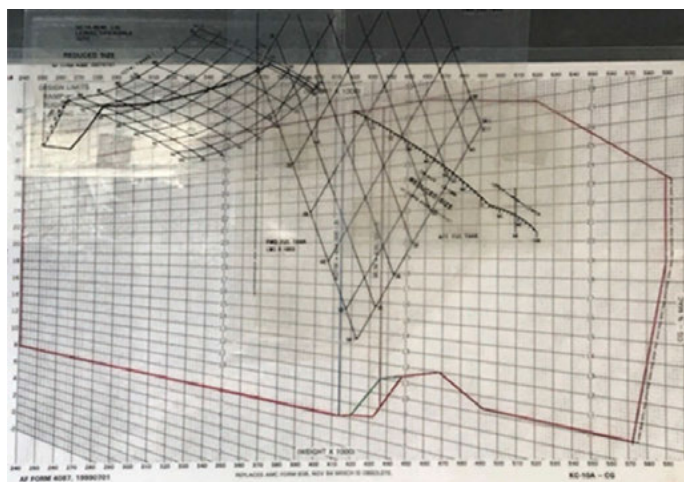
Meantime, we arrived in country and began offloading fuel to receivers. After establishing the fuel was where we needed it, I looked out and saw a battle occurring on the ground below us, complete with muzzle flashes from howitzers, tanks, and mortars! I had seen gunfire during previous deployments but never like this. It was really condensed, and I hadn't seen the line between opposing forces so clearly before.

Eventually, the weather forecasts proved correct; conditions deteriorated and we diverted to another location. During our 9.5-hour night, we offloaded 117,000 pounds of fuel to fighter aircraft who were doing what they could for the soldiers on

the ground. Just another day at the office for any given KC-10 crew—but it hadn't been “just another battle.” The following day, we learned it was one of the largest in the region in over a year. However, on this night, 100 percent of U.S. troops and our allies survived because we all did our jobs well. Few things put a smile on your face quite like that.

Now it's time to rest, though. This deployment isn't over, and we still have to get this aircraft and its gremlins back home! 

To obtain the full article, please email [nathaniel.harris.4@us.af.mil](mailto:nathaniel.harris.4@us.af.mil)



The author's “Ouija board” used to determine the center of gravity.



The author and his fellow crew members took this photo the night after their “Gremlin Mission.”





# What Goes Up May Come Down (Flaming HOT and in the Wrong Place)

BY MR. MONTE NACE, STAFF WRITER

**W**e live crazy busy lives in a crazy busy time. Few of us are immune to family stress from elders, youngsters, or partners. Some of us work in environments that are a bit more stressful than we would like. Most of us feel social pressure to keep pace by buying more things (which can mean working more hours in stressful jobs).

It makes sense, then, that we might hope to find some temporary peace—a fleeting moment of solace—watching a sky lantern celebration. Are you wondering what a sky lantern is and why you should care?

Sky lanterns are, as the name implies, lanterns that float in the sky. People typically launch them in dark conditions, such as just after dusk, which makes them that much more beautiful. Even watching them on television or in online videos can be hypnotic, as they emit a warm glow against a night sky. You can tell that

observers and participants often single one out and watch as it goes higher, farther, higher still until they lose sight of it amid the crowd of other lanterns.

These free-spirited little beacons of light are often associated with happiness or hope. For example, some couples use them to celebrate a wedding. Families with a deceased loved one often use them as a memorial of sorts or in charity fundraisers for diseases like cancer. How can something so calming to watch be so dangerous?

The problem with sky lanterns is that they are made from paper and are powered by a flammable component such as a candle or a fuel cell. If the words “paper” and “flammable” in the same sentence sound dangerous, you are well on your way to understanding the problem. These lanterns work kind of like a hot air balloon except they are much less predictable and are virtually uncontrollable.

When sky lanterns fall—and they eventually do—they can obviously ignite a fire on rooftops or lawns. Even when launched over water, the boats and boat docks below can be set ablaze. (And do we really need more trash in our lakes, rivers, and oceans?) Also, ranchers don’t appreciate the potential danger if the metal fragments are baled into hay, damaging equipment and/or causing a slow, agonizing death if consumed by livestock.

Some states or municipalities have already banned sky lanterns. In others—Tennessee, for example—only licensed professionals can operate them. I found at least one company that travels the country (and goes to a few international locations) conducting light “festivals” using sky lanterns. They advertise that their products are non-flammable and biodegradable, and they have a “crew” of people picking up debris as it falls.



**Some states or municipalities have already banned sky lanterns. In others—Tennessee, for example—only licensed professionals can operate them.**

In October 2017, a sky lantern caused burn injuries to 15 people, including two children, and destroyed four houses in India. In July 2017, an incident damaged a facility built for the 2016 Olympics in Rio de Janeiro, Brazil, even though lanterns were outlawed there in 1998.

The devices are equally dangerous and equally prevalent on American soil. In April of this year, a Minnesota fire chief found a charred paper sky lantern on the roof of his home—despite the fact that it is illegal to sell or use them in that state. In 2016, hundreds of sky lanterns released north of Denver, Colorado, landed five miles away on dry grassland, spooking landowners and their livestock. Also that year, a launch in support of domestic violence victims led to air traffic being rerouted at an airfield in Anchorage, Alaska, when lanterns appeared in the flight path. Six years ago, in 2012, a Michigan family swerved off the road and crashed into a tree to avoid hitting sky

lanterns. In 2011, 800 acres burned in Myrtle Beach, South Carolina, when a lantern torched dry brush.

In all fairness, sky lanterns sometimes hold a religious or cultural purpose for users. Most states in America, however, have banned their use, while some municipalities specify the lanterns be tethered or tied down so they do not float away. Other locations require a special permit or license. It is important to remember the potential for danger, though; a “professional” company conducted the 2016 Denver event mentioned earlier. Granted, there was no large-scale incident due to the event, but there could have been.

If sky lanterns are illegal in so many places, why does it even warrant space on these pages?

1. These things can travel higher up and farther away than intended. If they are **legal** in your area, you may not be interested in attending

a launch, but that does not mean you will not encounter one. They can pose a danger, whether lit or spent. Would you want to run over something with metal wire while mowing your yard or driving down the highway?

2. If sky lanterns are **illegal** where you live, you are not immune to potential danger. Sadly, they are available online at many well-known retailers’ sites. My guess is they are probably on the shelves at some brick-and-mortar stores, too. People who want them will get them, and they will likely use them carelessly. Simply be aware and be proactive in reporting their use.

As a responsible Airman, you probably know much more than I do about what can go wrong with objects aloft. But maybe today I’ve enlightened you a little about one object I hope you never encounter— in the air or on the ground. 🛩️



# Medical Milestones for TBI

BY MS. RITA HESS, STAFF WRITER



**A**utumn is such a treat for the senses: leaves crunching underfoot, frosty morning air on your cheeks, the aroma of crisp baked apples, and—wait! This safety article is supposed to be about FALL (an incident instead of the season)!

Let's start over by discussing something Airmen already know. Depending on your job, you may be working high enough above the ground that a fall will most certainly kill you. Even if you survive, you may end up with a traumatic brain injury (or TBI), much like what service members can be exposed to during combat.

But it doesn't just happen on the job. Indeed, a TBI is the result of **any** blow or jolt to the head that disrupts the normal function of the brain. It can be from the head striking an object (e.g., the ground) or from a flying or falling object striking the head. This means that in addition to the flightline,

maintenance shop, training exercises, or combat, you can get a TBI while playing sports, driving a car, riding a motorcycle, or repairing a roof.

Brain injuries can also occur without a direct blow, such as with "whiplash" from violent shaking inside the skull, which is common in combat and motor vehicle crashes. This is often called an "invisible" wound.

More than 13,000 service members and veterans are diagnosed with a traumatic brain injury each year. Concussions (known as mild TBIs) sometimes go undetected or undiagnosed initially. More serious TBIs can cause nerve cells in the brain to stretch, tear, or pull apart—making it difficult for the brain to transmit messages to other parts of the brain or to the body.

TBI symptoms can be debilitating. They include headaches, dizziness,

memory problems, irritability, trouble sleeping or concentrating, or sensitivity to light or noise. The injury can also cause behavioral, functional, or psychological changes. A critical treatment step is rest, allowing the brain to recover while reducing the risk of further damage.

Injuries can be life changing, but there is good news! Thanks in part to research funded by the Department of Defense (DoD) and the Army, marketing of the first-ever "brain trauma indicator" blood test was cleared by the Food and Drug Administration earlier this year, which should help with timely detection and thus better outcomes.

The test identifies two brain-specific markers that appear rapidly in the blood and remain elevated 12 hours following a head injury. These proteins indicate there may be blood (or a blood clot) in the brain, indicating a serious



## Remember, a fall can have long-term consequences whether it happens on or off the job. In the case of a traumatic brain injury, early evaluation and treatment can shorten return-to-duty time and ensure a better recovery.

injury that might require surgery. Without the blood test, medical professionals must rely on reported symptoms or other signs to evaluate and treat patients.

The Army will begin limited user testing in early 2019. The device that runs the blood test is currently used in a laboratory, so it isn't exactly portable. However, work is ongoing to make the machine smaller and to improve on the current 3- to 4-hour wait time for results.

More good news involves combining early diagnostics and a holistic treatment approach in a new facility at the 96th Medical Group at Eglin Air Force Base in Florida. Those who suffer with a TBI often fear being considered unfit for duty or suffering other adverse career effects, so they avoid getting help. But, as noted earlier, early diagnosis and the right treatment can actually provide a faster recovery.

“Unfortunately, a delay in care can lead to worsening TBI complications and greater impairments in functioning,” said Thomas Piazza, Medical Director of the Invisible Wounds Clinic. “This leads to outcomes worse than if the service member sought care sooner. That’s not just a problem for military readiness; it’s a problem for the individual and their families. The service member wants to be a part of their work and unit missions, but they just can’t.”

To achieve the best long-term outcomes, provider teams at the Air Force’s first comprehensive TBI center


at Eglin will use a holistic approach. This involves treating the patient’s mind and the body as a whole—including the mental, physical, social, and spiritual pillars of health. The new clinic, which hopes to open in late 2018, will blend traditional medicine and procedures with tools such as acupuncture, art and music therapy, yoga, mind-body medicine, electrical nerve stimulation, and others.

Remember, a fall can have long-term consequences whether it happens on or off the job. In the case of a traumatic brain injury, early evaluation and treatment can shorten return-to-duty time and ensure a better recovery. If you suspect that you or someone you know may have a TBI from a fall or any other cause, seek medical attention as soon as possible.

### DID YOU KNOW?

- › The majority of Airmen experience a TBI from a non-deployed setting due to the nature of their training

or participation in sports and leisure activities.

- › Since 2000, more than 375,000 service members have been diagnosed with a TBI in training and combat situations, with the most common form being a mild TBI (also known as a concussion).
- › It’s estimated that 1.7 million people sustain a TBI annually. Of those diagnosed, approximately 50,000 die and 282,000 are hospitalized.
- › Unit readiness relies on early detection and timely treatment of brain injuries.
- › The vast majority of TBI cases are mild with a complete recovery within 7–10 days.
- › Your Military Treatment Facility has tools and resources to help educate Airmen, families, retirees, and DoD civilians about the prevention and treatment of TBI. 

### WANT TO KNOW MORE?

#### Air Force Medical Service – Traumatic Brain Injury Toolkit:

[www.airforcemedicine.af.mil/Your-Healthcare/Healthy-Living/Health-Month/March/Traumatic-Brain-Injury-Toolkit](http://www.airforcemedicine.af.mil/Your-Healthcare/Healthy-Living/Health-Month/March/Traumatic-Brain-Injury-Toolkit)

**Air Force – Wounded Warrior Program:** [www.woundedwarrior.af.mil](http://www.woundedwarrior.af.mil)

#### Air Force – Invisible Wounds Initiative:

[www.woundedwarrior.af.mil/Airmen-Veterans/Invisible-Wounds-Initiative](http://www.woundedwarrior.af.mil/Airmen-Veterans/Invisible-Wounds-Initiative)

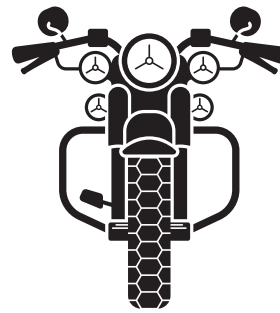
#### Air Force Center of Excellence for Medical Multimedia – TBI:

[www.tbi.cemmlibrary.org](http://www.tbi.cemmlibrary.org)

#### Defense and Veterans Brain Injury Center – A Head for the Future:

<http://dvbic.dcoe.mil/aheadforthefuture>

# 4 Tips for Safer Motorcycle Riding



BY MS. CAROL HUBBARD,  
STAFF WRITER

According to the National Highway Traffic Safety Administration (NHTSA), motorcyclist fatalities occurred nearly 28 times more often than passenger car occupant fatalities in 2016 traffic crashes. Are motorcycle riders persuaded by such sobering statistics? No. However, here are four proven ways to reduce your risk of becoming a crash statistic.

## 1. PREPARE FOR THE DANGERS OF RIDING IN TRAFFIC

NHTSA also reports that when motorcycles and other vehicles collide, it's usually because a vehicle violated the motorcyclist's right of way.

Three factors—unaware drivers, visual challenges, and aging drivers—make it dangerous to be a motorcyclist in traffic. First, because there are far fewer motorcyclists in the mix, most drivers aren't planning for an encounter with you. Second, the relatively small size of you and your motorcycle makes you less likely to be noticed and more likely to be obscured by a blind spot, object, or poor weather conditions. Third, our aging population means that you may encounter someone in traffic who has impaired eyesight, hearing, or reflexes.

You can compensate, however, by always (night OR day) riding with headlights on; wearing brightly colored reflective, protective apparel; slowing down, scanning the road farther around and in front of you; and thinking strategically.

## 2. LISTEN TO YOUR GUT

If you pay close attention, your intuition can sometimes warn you of danger. For example, an active 29-year-old rider (and helicopter pilot) from Colorado thought nothing could stop him. One day, however, he was nearing an intersection and noticed two cars approaching—one on the right who was beginning to stop and one on the left who was clearly going to run the stop sign.

Rather than slowing down, he continued and soon realized he was going to collide with the car on the left. He did—and he broke a thumb and then his knees before going airborne and landing head first on the vehicle's windshield. His full-face helmet saved him from suffering massive injuries or death, but it took months to recover.

This rider said the experience taught him that he should have trusted his intuition, which told him the vehicle on the left was not going to stop. He now tries to avoid busy intersections and ALWAYS assumes people don't see him.

## 3. GET THE RIGHT TRAINING, PRACTICE, AND EQUIPMENT

A rider from Virginia had a steep learning curve on this topic. He and some friends—three of whom were competitive motorcyclists—were going to ride in a California desert the morning after a bachelor party. His friends gave him a motorcycle, boots and pants, a chest protector, a leather coat, and some gloves. They then spent an hour covering the basics of how to ride.

The problem was that this occurred after a night of drinking, and the young Virginia man was not a skilled rider. He had fun riding over some hills and sandy areas, but he soon approached a ditch without the skills to jump it. The bike's front wheel dropped into the ditch, which flipped the bike into the air. It landed on his foot, breaking it in five places.

The experience taught him to ride only in situations within his skill level, always get adequate training, never mix alcohol with riding, and “dress for the crash, not for the ride.”

## 4. REMEMBER THE LAWS OF PHYSICS

The reality of what happens when a human body—traveling at 30, 50, or 75 mph—collides with a solid object without the protection of a metal frame, seatbelts, and air bags is far worse than most people realize.

Another Colorado rider realized that when he was following shortly behind his friend on a ride. The friend in front, who swerved to miss a dog, hit a truck head on. The friend's arms, collarbones, ribs, and legs were all broken; his face was unrecognizable; and his brains were splattered on the truck that hit him.

The laws of physics dictate that when you're riding a motorcycle, death and serious injury are much more likely for you than for drivers and passengers in vehicles. You have only one body and brain. Don't become a “statistic” by disregarding commonsense motorcycle safety. 🛡️

A1C Tye Braden, a nondestructive inspection journeyman with 19 MXS, Little Rock AFB, Ark., calibrates an ultrasonic device that sends out sound waves. When the waves are bounced back at a certain frequency, NDI Airmen know they've found a crack.

USAF photo by A1C Rhett Isbell

## Early Mishap Prevention: Just What the Doctor Ordered

BY MS. RITA HESS, STAFF WRITER

On April 17 this year, an engine on a Southwest Airlines flight broke apart, ultimately killing a woman in a window seat and causing sudden cabin depressurization. An inspection on the Boeing 737 just two days earlier revealed no problems with the plane or its engines. But finding flaws is not always easy.

Metal fatigue, for example, is sometimes invisible. It can occur due to issues like stress or vibration on older aircraft—or even on new planes if it is a hidden manufacturing defect. Indeed, a tiny crack that you cannot see might turn catastrophic within seconds and bring down an airliner.

The National Transportation Safety Board (NTSB) indicated early on that in the April fatality incident, a blade in the engine broke in two places: (1) where it attaches to the main hub and (2) higher up—about midpoint of the blade. It is unlikely that a routine visual inspection would have found it.

Earlier this year, in February, a United Airlines plane using a different engine experienced a similar issue that resulted in no injuries and only minor damage. Earlier still—in 2016—a fan blade separated and debris ripped a 16-inch-long hole in the fuselage of yet another Southwest Airlines plane, after which the engine

manufacturer recommended that airlines should conduct scheduled ultrasound inspections of the blades.

*So what does Air Mobility Command do to proactively spot metal weakness or tiny cracks that cannot be seen in a visual inspection?*

To fully understand this process, let's think of a potentially catastrophic aircraft defect like we think of human disease. Even the best physicians (maintenance personnel) can have difficulty diagnosing cancer (the potential issue) in a patient (a plane) simply by looking with the naked eye. So a physician who suspects cancer might order an X-ray.

Airmen from the 19th Maintenance Squadron Nondestructive Inspection (NDI) Shop in Little Rock, Arkansas, for example, use this type of tool to help them see cracks and other imperfections in aircraft parts that are capable of taking down a plane. One such inspection uses liquids to help illuminate potential dangers that are otherwise undetectable. That is incredible! Problem is, those processes generate chemicals.

The latest nondestructive inspection process is *computed radiography*, which is similar to an ultrasound, scan, or MRI for ill patients. The new digital technology will replace the X-ray film used by approximately 1,200 Air Force NDI technicians over the next few

years, thus eliminating the chemical process and keeping those toxins out of waste streams. Additionally, it may well affect every airframe.

"Every aircraft that we fly in the Air Force—whether it's a manned or an unmanned—has some level of inspections that are required on a reoccurring basis," said Michael Paulk, Air Force NDI Office chief. Nondestructive inspections are performed on many parts of an aircraft either after a specific number of operating hours are reached or after an aircraft encounters severe flying conditions or hard landings to determine the existence and extent of damage.

In addition to being more accurate and better environmentally, the new digital format will save money. The price to buy 50 sheets of X-ray film is about the same as buying one digital plate—a plate good for 500 uses. Plus, the digital format lets NDI technicians enhance images for clarity if needed or electronically share them with experts for second opinions.

Deployment comes easier, as well. The new equipment will fit on one pallet instead of four, saving precious cargo space and setup time on arrival—from at least two days down to four hours. The Air Force Life Cycle Management Center is training technicians on the equipment, which is expected to replace all legacy systems within five years.

"Just like the doctor might do an ultrasound, an MRI, or an X-ray, we do basically the same thing to *our* patients, which are airplanes and the components of airplanes," Paulk added. 🛩️





# EDUCATION: A POWERFUL WEAPON

BY MS. ARYN KITCHELL,  
STAFF WRITER

It's back to school time but not only for children; college classes are starting, too! Get ready for syllabi, new professors, and plenty of assignments. The start of another school year is exciting and full of potential, but it can also be stressful. Balancing classes, work, and personal time can add to the stress. School isn't just about the time you spend in the classroom—you also have to dedicate time at home to focus on assignments

and studying. Have these tips in mind during the school year to keep yourself afloat.

First things first.

## HOW MUCH SHOULD STUDENTS WORK DURING SCHOOL?

School administrators recommend working 10-15 hours per week. Working part-time isn't always an option for some students, particularly those of us who live off campus and have families to take



care of and bills to pay. So plan your school schedule around your job hours or utilize online classes. If you are employed full-time, try being a part-time student to see how that balance works for you.

When I first started college, I was also starting a new full-time job in the evenings. My adviser told me that it was not a good idea to juggle the two, especially when I was just starting. I thought I had the perfect schedule arranged, but I was going to school at 8 a.m. and working until

11 p.m. It was extremely difficult for me to manage full-time school and work, and my grades suffered for it that semester. After that, I reevaluated what I could do to make ends meet and still get my degree.

### TRY TO GET PLENTY OF EXERCISE



This may sound like I'm adding just another task to your already too-hecktic day, but exercise is good for your heart and keeps your body healthy. Schedule time to work out at the gym in town, at school, or at home. It's all too easy to skip the gym if you tell yourself you can't fit it into your day. Once it's on your schedule, stick with it. I use classes to my advantage when it comes to exercise. Since my classes are in different buildings that are far away from each other, I like to use that time to walk. I also take the stairs whenever I can.

### EAT HEALTHY



Sometimes I get out of bed later than I should, so I don't have time for breakfast. Then, because I woke up late and I'm rushing from class to class, I eat chips out of a vending machine instead of getting an actual lunch. Once I'm home, I feel so hungry that I eat the first thing I can get my hands on—also usually unhealthy. This type of eating does not help my school day. When we are hungry, it's hard to focus on class. Then when we eat unhealthy foods, our bodies don't get nutrition.

Skipping meals leads to a lack of energy, so eat a good breakfast every morning. Having breakfast gets your day off on the right foot. Try to eat something nutritious at each meal; veggies and fruits are great to fill up on and still feel good. Take time to pack yourself a lunch so the vending machine doesn't tempt you. Drink

“Education is the most powerful weapon which you can use to change the world.”

- Nelson Mandela

plenty of water throughout the day by keeping a water bottle with you that you can fill as needed.

### SLEEP!

Most students struggle with sleep. Assignments have due dates, so it may seem like the perfect plan to stay up and finish a paper. If you've been active at school and work all day, it can be especially hard to calm yourself down in the evening and get a full night's rest. Most people need 7-9 hours of sleep each night, and it is essential for keeping you attentive and active. Without it, you have to work that much harder to concentrate on school. So don't pull all-nighters, give yourself plenty of time to fall asleep, and try to put the screens away at bedtime.



I used to go to bed way too late and then struggle to wake up in the morning. After so little sleep, it was hard to go to my classes and actually learn anything. I decided to change my sleeping habits by giving myself a bedtime (yes, a bedtime!). I try to stick to that as well as I can.

### TAKE TIME TO RELAX

Relaxation is important for your mental health. You should take time every day to relax, since unwinding before bed can help you sleep better. Reduce



your anxiety by watching a good movie, listening to music, or reading a book. Whatever you enjoy doing, just make sure you give yourself time to destress from the day. It may seem like a waste of time to relax instead of studying or doing assignments, but it's important to set those things aside occasionally.

### DEAL WITH STRESS APPROPRIATELY



You're going to feel stressed sometimes, and that's okay, but it's important to deal with it in healthy ways. Talk to friends or family. Go outside to enjoy the sunshine or the night sky and take a walk. Put down the books and take a shower. Do something to take care of yourself away from whatever is stressing you.

When I'm having a busy day and I feel overwhelmed, I give myself time for a guilt-free nap. I put everything aside and set my alarm. When I wake up, I usually feel much better about the day. Then I get back to whatever was stressing me out before, but it's no longer stressful.

In summary, college can be tough but so rewarding! As Nelson Mandela once said, “Education is the most powerful weapon which you can use to change the world.” 🌍



# Surviving the Storm: *My Journey to Recovery*

BY A1C KAYLEE DUBOIS, 633D AIR BASE WING PUBLIC AFFAIRS

**A**lthough “wingmanship” is something I live every day as an Airman, I have been familiar with the concept my entire life. When I was a 16-year-old assistant Cub Scout leader, I sent a pack of 8-year-old Scouts on a mission to find branches to whittle into slingshots.

“Remember to look for strong, mendable tree branches,” I shouted.

When they returned, I began whittling the tree bark of my own branch with a knife, demonstrating how to bend branches without snapping them. Soon all the boys jumped up from their seats and began shouting.

“Help! Ms. Kaylee is bleeding! Help!”

I looked down and realized I had cut my finger. Looking back, I chuckle at the support those Scouts gave me over a small wound that only needed a Band-Aid. I wish I’d had those tiny wingmen these past nine months.

## A STORM BREWING

Last fall, I felt like I lost my foundation when my best friend was reassigned and my supervisor (and biggest mentor) left on deployment. Soon, I was struggling to find my place as a new Airman and perform at the same level as my peers.

I developed a constant overwhelming feeling, as if I was spiraling down into a deep pit. Unable to find a grip to hold onto, I didn’t think I could pull myself out of that hole—I would never

feel happy again. All I wanted was to hit rock bottom, so maybe, just maybe, I could start over again.

I silently begged, “Please just make it stop.”

What did I want to stop? My life? No, not my life. My thoughts, the pain, the sadness. I felt exhausted and alone, chaotic—imprisoned in a self-loathing bubble I couldn’t pop.

I thought, “You’re never good enough. People don’t like you. You’re constantly a bother. You’re awful at everything.”

Then those self-destructive feelings turned to rage; I snapped at friends, family, and coworkers. It was like being trapped inside my own body, watching an imposter take possession of my ordinarily warm and friendly disposition—slowly whittling away at Kaylee.

The clouds rolled in. Before my supervisor deployed, we had talked about how he struggled to find his place as an Airman. He said the 633d Medical Group Mental Health Clinic helped him, so I decided to speak with a therapist there. After one appointment, I understood what I suffered from—that it was treatable and common among military members. I felt less alone but still felt pieces of me were being chipped away.

When I thought things couldn’t get worse, my father was diagnosed with cancer, and I was afraid of losing him. My new supervisor suggested I visit

a chaplain, so I gave it a shot. I left his office feeling better about my dad’s situation and hopeful for his future.

During my own recovery, though, I still lashed out at times. I used my sadness like a blanket to hide from the outside world. I couldn’t find the energy to care about anything.

## SEEKING SHELTER

One day, as I dealt with the storm brewing in my mind, a real storm developed. The base was on mission-essential reporting due to snow, so I sheltered in my apartment for four days, limiting my interactions with the outside world. I never felt more alone. I didn’t leave my couch. I barely ate or showered. I sat staring blankly at my television.

Later, I discussed the events with my therapist and we agreed that I needed treatment. That day, I admitted myself into Naval Medical Center Portsmouth’s Crisis Stabilization Program. In one week, I learned about self-care, communication, fears, expectations, and being mindful. I also practiced those concepts through art therapy, yoga, meditations, and group therapy exercises.

The program forced me to look at events that may have contributed to my anxiety and depression. It was emotionally exhausting but refreshed my sense of being. It mended my self-worth and life expectations. I wasn’t “cured” from depression and anxiety but felt I could tackle it. The day I left



the hospital, I began to resemble who I once was.

### CLEARING SKIES

During my journey to recovery, I learned to become proactive in my own happiness. I needed to help my wingmen understand what I was going through and my need to rely on them for help. Ironically, a few days after I returned to work, a friend told me he had tried to help me all those months, but I never noticed. He has been incredibly valuable to my recovery, helping me cast away stubborn, destructive thoughts.

Make no mistake: every day is still a struggle. I had to retrain my thoughts. I take medication and visit the Mental Health Clinic regularly. I sometimes feel depressed, but I now rely on techniques I learned to help me recover, such as forcing myself into nature by taking a friend's pet to the park or reading a book in my hammock.

Also, talking candidly about my experience helps me connect with others. I feel part of the team—part of a family. Now that I have a better grip on life, I am far enough from my rock bottom to catch a glimpse of light shining from the top. That is where I want to be.

Tackling mental illness takes time. It's an obstacle in the journey of life, but you must stay alive to see where that journey takes you. Things will *always* get better.

I'm definitely not the person I used to be, but I'm moving toward her. Thinking back to those days when I stood in the center of a Cub Scout troop concerned for my well-being, I am now surrounded by people who never gave up on me. They are slowly shaping me back into Kaylee.

### FAST FORWARD

Although that chapter of my life is

**Editor's note:** This is a condensed commentary written for National Mental Health Month. If you or someone you know can relate to Kaylee's story, please contact:

- Military Crisis Line at 1-800-273-8255 or
- #BeThere by calling 1-844-357-PEER (7337) or texting 480-360-6188.

**For urgent assistance, call 911.**

now turning around, my journey wasn't easy. Clouds didn't suddenly part and fill me with sunshine and happiness. Instead, I spent seven months learning to manage—not cure—my depression and anxiety. 🇺🇸

Photo above: A1C Kaylee Dubois, a 633d Air Base Wing Public Affairs photojournalist, spends time with her dog, Watson, at JB Langley-Eustis, Va. Dubois spent roughly seven months in mental health treatment programs, and once she was successful in managing her own recovery process, she adopted a rescued dog, who now aids in her "self-treatment."

USAF photo by TSgt Katie Gar Ward





U.S. Army soldiers prepare to parachute into an exercise region as part of Green Flag Little Rock 18-06 on April 12, 2018, near Alexandria, La.

USAF photo by SSgt Jeremy McGuffin



A1C Brian Parker, Dyess AFB 39 AS loadmaster, gives the thumbs up to his fork lift driver before unloading cargo at Green Flag Little Rock.

USAF photo by SSgt Jeremy McGuffin

# A Behind-the-Scenes Look at Training

**BY MS. KIM KNIGHT, STAFF WRITER**

**T**raining helps keep troops sharp and ready to carry out their missions. However, there is training—and *then* there is Green Flag Little Rock!

The 34th Combat Training Squadron at Little Rock Air Force Base in Arkansas executes Green Flag, Air Mobility Command’s only joint accredited flag level exercise. Its primary objective is to support the U.S. Army’s Joint Readiness Training Center and provide a simulated combat environment with emphasis on joint force integration. No two exercises are the same, which helps the mobility enterprise continually challenge its warfighting skills, while providing real-world experiences with partners they may not be able to get at home.

That is the official description. But what is it like behind the scenes—trying to plan and carry out training for Army brigades, special ops forces, USAF airlift and contingency response units, and international partners? And how does Green Flag Little Rock do it repeatedly,

when a standard exercise trains hundreds of Air Force participants and thousands of Army soldiers?

MSgt Francesco G. Ventura, Superintendent of the 34th Combat Training Squadron at Little Rock AFB, answered those questions and more.

“Working with the Army—transporting them and their cargo and then carrying out the training they require—also gives us the combat training we need for when we have to do this in foreign countries, for example. We run Green Flag out of Little Rock, but we use Fort Polk, Louisiana, as the staging area.”

According to Ventura, these exercises involve much more than just moving cargo and personnel, and it takes considerable time to plan for that.

“A recent example was the 82nd Airborne, where we dropped the troopers into their play area,” he said. “We start coordinating 180 days out—getting information from the Army unit about how much airlift they’ll require. Even so, we transition quickly from

one exercise to the next. Other Green Flag players have included the U.S. Marine Corps, British Army, and Royal Canadian Air Force. When we know we have a foreign military coming in, we plan even further in advance.”

People are sometimes surprised at how many foreign militaries participate, but Ventura said these partnerships are extremely important.

“When we deploy or when we are in another country,” he said, “it involves more than one service. It is very difficult to just show up at a location and integrate seamlessly, especially because of differences in regulations. Being able to practice in a training environment where we can learn about each other’s capabilities makes it much easier to transition when we get to an actual combat situation.”

In April, a Green Flag exercise was conducted with New Zealand. Training included troops from different countries jumping from a foreign aircraft with a foreign jumpmaster. They also rigged cargo for airdrops so that everyone could see how each



Loadmasters from 39 AS discuss flight operations during Green Flag Little Rock.

USAF Photo by A1C Codie Collins



SAFETY CULTURE

SrA Ryan Firl, Dyess AFB 39 AS loadmaster, and CMSgt William Wunderlin, Moffet Field ANG 130 Rescue Squadron observer coach trainer and loadmaster, gather parachute bags after a cargo drop during Green Flag Little Rock.

USAF photo by A1C Grace Nichols



Members of the Royal New Zealand Air Force congratulate each other after a flight during Green Flag Little Rock.

USAF photo by A1C Grace Nichols

country does it. As Ventura explained, everyone accomplishes the same goal using different methods. At the heart of the exercise is the opportunity to learn from one another. Safety is paramount, however.

“On each flight, we have an Observer Coach Trainer, which is a member from my squadron and usually an instructor,” said Ventura. “There are always two trainers on the plane—a pilot up front and a loadmaster in the back. Plus, everyone in my squadron watches to make sure regulations are followed—whether U.S. regulations or from another country. We go through things numerous times. If

something doesn’t look right, we stop it immediately.”

All Green Flag exercises involve the same type of events (e.g., airdrops, cargo and/or personnel moves, etc.), but each one usually involves different players.

“Before an exercise, we ask a unit what they want to see and do,” he explained. “Maybe they do not handle much cargo, so they don’t want to do airdrops. We tailor it to fit what they want. One may have numerous heavy equipment loads—things like Humvees and different vehicles the Army uses that we typically don’t. We also did a mass airdrop of 400–500 people onto a play area. Again, that is something we don’t usually do. It was an integration of something like five C-17s and eight 130s that did it all in one night.”

In October this year, a group from Sweden, New Zealand, Canada, and Australia will “play” together in a much larger exercise than usual. MSgt Ventura said most exercises run about 10 days, while those involving the Army run one month. He added that the 34th Combat Training Squadron is uniquely qualified to plan them because of the many different career fields there.

“We are the only squadron that has combat recovery survival personnel. Plus, we have two Army ground liaison officers, as well as loadmasters, pilots, navigators, and combat control personnel. Our one squadron—with just 35 people—can build a typical exercise that serves about 12,000 Army personnel and 300 Air Force players from scratch to completion. Then, for the 10 days during the exercise, we run 24-hour ops.”

Most importantly, he said, his group does it without any damage and without anyone getting hurt. Then, as quickly as an exercise wraps up, they go straight into planning the next one.

“During 2018, we had an exercise in February, one in April, and one in July. We will finish the year with one in October and another in November. It’s rough, but we make it happen.” Indeed, Green Flag is an opportunity for U.S. and coalition forces to collaborate and integrate with several different career fields. The essential tactical-level training is vital, as is the experience of working with international partners.

As noted earlier, there is training—and then there is Green Flag Little Rock! 





Members from the 60th Aerial Port Squadron load a cementing trailer into a C-5M Super Galaxy at Travis AFB, Calif., May 15, 2018.

USAF photo by Louis Briscese

## AMC Assists Volcano Victims Worldwide

BY MS. RITA HESS, STAFF WRITER

**O**n June 3, 2018, a powerful volcano erupted in Guatemala, a Central American country south of Mexico. The Fuego Volcano, which means “volcano of fire,” was especially dangerous due to its deadly combination of hot lava, ash, and volcanic gas that traveled rapidly downward with little warning and engulfed the surrounding area. Thousands of people fled, but over 100 residents died and hundreds are missing (as of early July).

As always, members of Air Mobility Command answered the plea for help. An aircraft from the 172nd Airlift Wing in Jackson, Mississippi, flew a team of aeromedical evacuation, pediatric intensive care, and burn treatment specialists to Guatemala. They then

evacuated six injured children to the Shriners Hospital for Children in Galveston, Texas.

U.S. Southern Command (SOUTHCOM) donated hazardous gas detectors, tools, and personal protective equipment to assist Guatemalan emergency personnel at the site. Ironically, Guatemala hosted a relief exercise earlier in 2018 that involved an eruption at Fuego. More than a dozen nations participated, including residents of two communities adjacent to the volcano.

On American soil, a volcano erupted in May on the island of Kilauea in Hawaii. It did not pose a sudden threat to residents like Fuego, but the activity threatened wells at a

geothermal plant there. The 22nd Airlift Squadron from Travis AFB in California answered an urgent request to deliver a 55,000-pound cementing trailer aboard a C-5M Super Galaxy that helped mitigate potential well control hazards.

The 22nd Airlift Squadron is no stranger to critical payload deliveries. Unit personnel transported cargo to support hurricane relief in Texas and Puerto Rico last year, and they delivered supplies to Mexico after an earthquake. Indeed, the U.S. military has a history of assisting with international relief efforts—such as when hurricanes Matthew (2016), Irma (2017), and Maria (2017) caused widespread devastation in Haiti, St. Martin, and Guadalupe. 🇺🇸



# MISHAP-FREE FLYING HOUR MILESTONES

## 10,000 MISHAP-FREE FLYING HOUR MILESTONES



### MSGT SCOTT R. DILLINGER

MSgt Dillinger, the Senior Flight Engineer evaluator for the 6th Air Refueling Squadron, 60th Air Mobility Wing—recently achieved his 10,000-hour milestone. He has provided leadership, management, and standardization for both the 60th and 349th Air Mobility Wings since 1994.

Dillinger started his career as a C-5 flight engineer, accumulating 3,800 C-5 instructor and basic flight engineer hours with the 301st Airlift Squadron. He cross-trained and became a KC-10 Evaluator Flight Engineer, accumulating over 6,200 KC-10 hours with the 79th and 6th Air Refueling Squadrons.

Dillinger logged 1,029 combat hours in numerous operations and participated in many worldwide airlift and air refueling operations. Crews in the KC-10 community often call him to help solve aircraft system problems, and he is always willing to share his knowledge and experience with others.

### CMSGT TIMOTHY B. GAINES

As Loadmaster Superintendent of the 165th Operational Support Squadron of the Georgia Air National Guard, Chief Gaines is responsible for the safe loading and offloading of all C-130 aircraft in the 165th Airlift Wing.

He entered military service in August 1982 and was assigned to the 2/11 Field Artillery Battery Schofield Barracks, Hawaii. After leaving the Army in April 1986, Gaines resumed his military career in May 1986 when he enlisted in the 165th Mobile Aerial Port Squadron of Georgia Air National Guard. He became an aircraft loadmaster there; in 1993, he was reassigned to the 158th Airlift Squadron.

Chief Gaines served as Joint Airdrop Inspector, Instructor and Evaluator Loadmaster, and Aircrew Scheduler before being selected for his current position in January 2013. Not one to sit still for long, he earned his Bachelor of Science in Professional Aeronautics from Embry-Riddle Aeronautical University in 2018.



## Congratulations to MSgt Dillinger and CMSgt Gaines!

### 7,500 HOURS

#### 96 AS, Minneapolis-St. Paul ARS, MN

MSgt James E. Courneya

#### 164 AS, Mansfield, OH

Lt Col Jeffrey C. Siwik

#### 165 AW, Savannah, GA

CMSGt Francisco M. Ramirez

### 6,500 HOURS

#### 54 AS, Scott AFB, IL

Maj Joshua Pugliese

#### 96 AS, Minneapolis-St. Paul ARS, MN

Lt Col Donald L. Petros

#### 99 AS, JB Andrews, MD

CMSGt Gerald A. Barnett

#### 164 AS, Mansfield, OH

SMSGt Charles H. Walker

### 5,000 HOURS

#### 1 AS, JB Andrews, MD

Lt Col Matthew L. Inscoe

TSgt Ronald J. Giannetti

#### 54 AS, Scott AFB, IL

Maj Don Rolleg

#### 96 AS, Minneapolis-St. Paul ARS, MN

CMSGt John L. Grutzmacher

CMSGt Orin H. Johnson

#### 165 AW, Savannah, GA

TSgt Christopher L. Zeigler

### 3,500 HOURS

#### 1 AS, JB Andrews, MD

Lt Col Robert A. Aikman II

Lt Col Joel E. Gorham

Maj Joshua G. Hughes

CMSGt Stephanie D. Dunham

#### 54 AS, Scott AFB, IL

Maj Eric Babson

Maj Ryan Burns

Maj Curtis Raaberg

MSgt Dennis Morris

TSgt Matthew McKinney



# MISHAP-FREE FLYING HOUR MILESTONES

## 91 ARS, MacDill AFB, FL

Lt Col Ricardo Lopez

## 96 AS, Minneapolis-St. Paul ARS, MN

Lt Col Casey P. Dodds

Lt Col Dennis Mishler

Maj Noel P. Josephson

Maj Aaron D. Kutschera

Maj Daniel J. Schei

TSgt Patrick C. Woods

## 99 AS, JB Andrews, MD

Lt Col Grant W. McNelis

Maj Devin J. Chirinsky

## 165 AW, Savannah, GA

Lt Col David W. White

## 375 OG, Oklahoma City, OK

Capt Patrick Ng

## 2,500 HOURS

### 1 AS, JB Andrews, MD

TSgt Juan Antonio D. Ramirez

SSgt Christopher Moore

### 54 AS, Scott AFB, IL

Lt Col Brandon Dow

Lt Col Jacob Thornburg

Maj Yuri Batten

Maj Samuel Ensminger

Maj Tyler Marcotte

Maj David Scott

Maj Angela Vesce

Maj Matthew Zayatz

Capt Eric Butler

MSgt Katrina Graham

TSgt Suzanne Feely

TSgt Jason Smith

### 96 AS, Minneapolis-St. Paul ARS, MN

Maj Anthony J. Gatzke

Maj Matthew C. Misner

Maj Philip L. Noland

SMSgt Derek J. Fore

MSgt Quentin J. Will

### 99 AS, JB Andrews, MD

Maj Neal M. Ballas

Maj Tandon L. Mardis

Maj David N. St. Louis

TSgt Mugabe J. Cordner

TSgt Kevin M. Reilly

### 165 AW, Savannah, GA

Maj James J. Mockalis

Maj Cole J. Wagner

1Lt Ranon O. Barber

1Lt Matthew T. Chupp

MSgt Robert T. Haffly

MSgt Kevin Hay

MSgt Juan R. Saltares

MSgt Medie T. Still

### 375 OG, Oklahoma City, OK

Lt Col Jeremy Leighton

Lt Col Rob Nichols

Lt Col Scott Russell

Maj Scott Axelson



A KC-10 Extender with 305 AMW flies over Joint Base McGuire-Dix-Lakehurst, N.J., April 24, 2018. The KC-10 is an Air Mobility Command advanced tanker and cargo aircraft designed to provide increased global mobility for U.S. armed forces.

USAF photo by MSgt Mark C. Olsen



## TO SUBMIT MISHAP-FREE FLYING HOUR MILESTONES:

Send your request to: [mobilityforum@us.af.mil](mailto:mobilityforum@us.af.mil)

HQ AMC/SEE, 618.229.0927 (DSN 779)

*Please submit as shown in the listings above  
(first name, last name, sorted alphabetically within rank).*

# QUICKSTOPPERS

## AvORM EFB App


BY MR. KEVIN SLUSS, CSP  
HQ AMC FLIGHT SAFETY

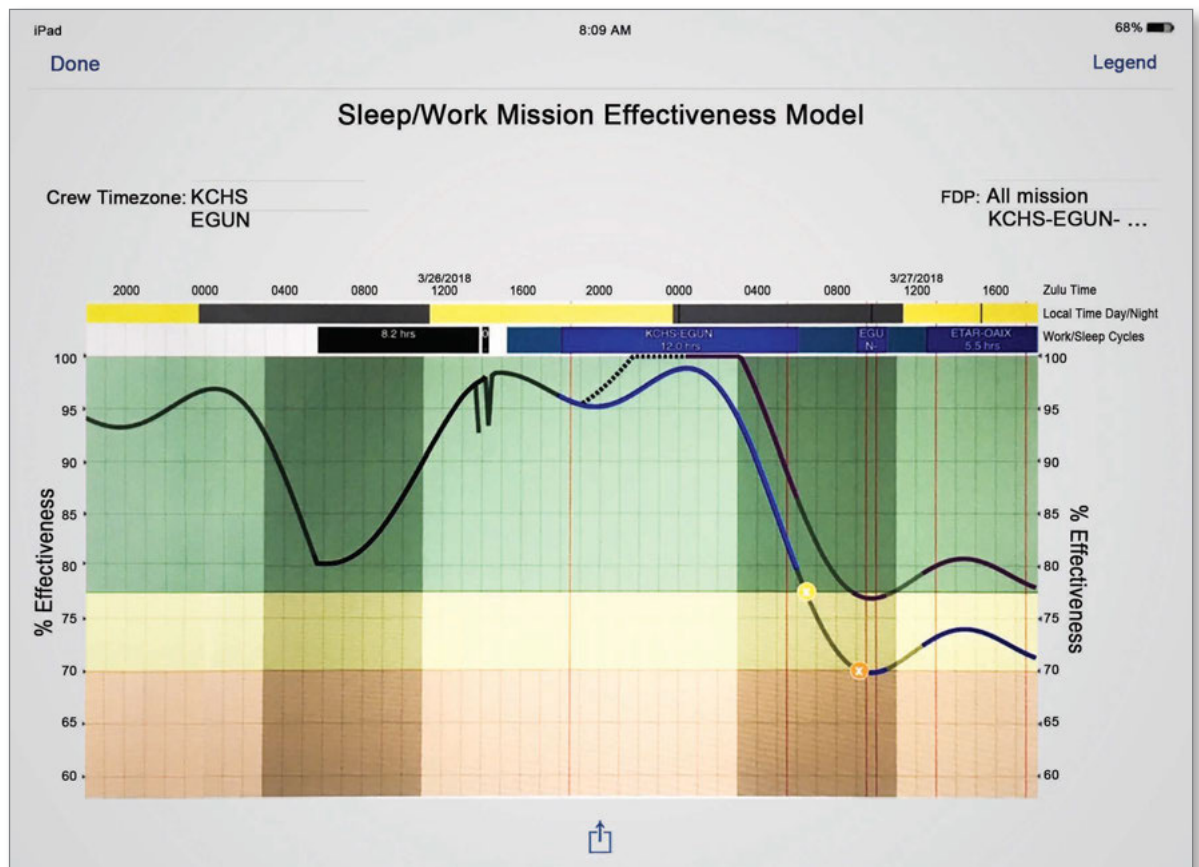
By the time you read this, you may have the new app for Aviation Operational Risk Management (AvORM) on your Electronic Flight Bag (EFB). It will provide users a stand-alone tool to plan and anticipate risk factors on flight missions. For the initial version, the itinerary requires manual input of mission name, aircraft, crew composition (basic or augmented), airports (by ICAO designation), drop zones or air refueling as applicable, and departure/landing times.

The app does not calculate enroute times. It mimics the capability of the AvORM online worksheet in GDSS. Help within the app provides further instructions. Future capability will permit uploading of the itinerary from GDSS and the ability to send to a printer or email.

The worksheet contains the 41 default risk factors and does not tailor by aircraft (so tankers will see the airdrop items, C-130s will see air refueling items, etc.) The app will generate a mission effectiveness (fatigue) graph based on the itinerary inputs.

The rewrite of AMCI 90-903, currently being published, will refer to the EFB app, as well as update guidance on the entire AvORM program.

If you have an improvement idea, fill out AMC Form 901 found on the AMC Flight Safety page on the Air Force Portal or at <http://static.e-publishing.af.mil/production/1/amc/form/amc901/amc901.pdf>. Send it to [orm.amc.se@us.af.mil](mailto:orm.amc.se@us.af.mil). 



Screenshot of the AvORM app sleep/work effectiveness graph that shows the Apple "send to" icon at the bottom.



# A DAY IN THE LIFE



TSgt Matthew Fisher, a C-17 Globemaster III flying crew chief with the 514th Aircraft Maintenance Squadron, 514th Air Mobility Wing, inspects the C-17's engines prior to a training mission at Joint Base McGuire-Dix-Lakehurst, N.J., June 15, 2018. ©

**USAF photo by MSgt Mark C. Olsen**