THE MOBILITY FORUM

THE MAGAZINE OF AIR MOBILITY COMMAND | FALL 2024

Combating Chronic Stress: The Power of Physical and Mental Rest

The Art of Predicting the Future

Mission Pressure—Understanding the Motivation and Its Pitfalls

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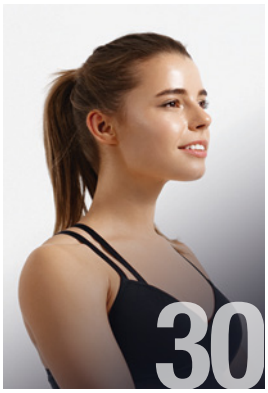

ON THE COVER

Capt Kyle Grosselin, an Executive Officer assigned to the 91st Air Refueling Squadron, performs pre-flight checks on a KC-135 Stratotanker during exercise Explode into Theater (EXPLODEO) 2024 at MacDill Air Force Base, FL, May 29, 2024.

USAF photo by SrA Lauren Cobin

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The Art of Predicting the Future

BY COL JOHN B. KELLEY, DIRECTOR OF SAFETY

Let me start with a question: When was the last time you tried to predict the future? Did you predict something good and then attempt to make it a reality, or did you predict something bad and try to prevent it from coming to pass? What information did you use and how much of your prediction was "gut feeling"? (OK, that was three questions.) For safety professionals, this process is called Proactive Safety: collecting data from the field, identifying hazards, and developing risk mitigations. However, it is a different story when your predictions are written down and on public display.

Gen Mike Minihan recently assigned creative writing homework to wing commanders across the Mobility Air Force. (Apparently, if wing commanders cannot escape homework, there isn't much hope for the rest of us!) Their task was to think about the risks at their installation and compose a scenario describing the next Class A mishap their base might experience—complete with root causes and risk mitigations. Then, five lucky commanders, one from each Numbered Air Force and the National Guard Bureau, would present their scenarios at the Spring 2024 Phoenix Rally during the Operationalizing Safety Vignette forum.

What emerged from the scenarios and the discussion at Phoenix Rally was as varied as the wings themselves, but there were some shared themes. The three most-cited factors in all the scenarios were fatigue/human performance, inexperience/discipline,

Photos Above:

SrA Davin Capeda, 6th Aircraft Maintenance Squadron Crew Chief, checks the tire pressure on a KC-135 Stratotanker July 7, 2023, at Yokota Air Base, Japan, in support of Mobility Guardian 2023.

USAF photo by TSgt Alexander Cook

A1C David Stanger, a Crew Chief with the 62d Aircraft Maintenance Squadron, services the engine oil on a C-17 Globemaster III participating in Exercise Rainier War 23A at Joint Base Lewis-McChord, WA, Sept. 26, 2023.

USAF photo by SrA Callie Norton

A1C Nathaniel Quesnel, 6th Aircraft Maintenance Squadron Avionics Specialist, installs a high-frequency radio prototype on a KC-135 Stratotanker at MacDill Air Force Base, FL, Feb. 13, 2024.

USAF photo by SrA Joshua Hastings

1 Lt Zach Mathewson, 6th Airlift Squadron C-17 Globemaster III Pilot, pilots a C-17 Globemaster III over an auxiliary field near Andersen Air Force Base, Guam, in support of Valiant Shield 2024, June 10, 2024.

USAF photo by SrA Keegan Putman

One of the quickest ways Airmen can bring new hazards to the attention of Safety, their peers, and their leadership is the Airman Safety Action Program (ASAP).

and high operations tempo.[1] These themes were consistent across safety disciplines, whether they were describing flight, occupational, or weapons scenarios. It was clear wing commanders were concerned with the risks their Airmen were facing and ways to minimize those risks. However, commanders, and AMC Safety, only know what they know through the data and information collected from the field. How would the Safety enterprise know when a new risk or hazard trend was developing?

One of the quickest ways Airmen can bring new hazards to the attention of Safety, their peers, and their leadership is the Airman Safety Action Program (ASAP).[2] Even though it is defined in DAFI 91-225, *Aviation Safety Programs*, ASAP is open to everyone who is part of an Air Force mission, including civilians and contractors. Your friendly neighborhood Safety office is happy to help you file an ASAP if you need assistance. The purpose of the program is to encourage and simplify self-reporting of hazards and error conditions in order to accelerate risk reduction and mitigation strategies. And since the reports protect your identity, you can tell your story of how your 3-level maintainer or aircraft commander "mistook the freeway for the runway" or "swapped the warp core with a flux capacitor," how you were the hero and saved the day, and everyone had a good laugh during the debrief at Waffle House™ or In-N-Out Burger™. These near misses can seem like one-of-a-kind events, but when aggregated, hazard trends emerge and Safety offices can develop preemptive mitigation measures. Furthermore, your community benefits from your experience, and commanders learn the challenges faced by the Airmen.

I, like the wing commanders at Rally, wish we possessed a magic crystal ball to foresee future mishaps and be able to intercede beforehand. Unfortunately, as our great baseball prophet Yogi Berra famously said, "It's tough to make predictions, especially about the future." Our best prediction assets are smart, safety-minded Airmen with a well-honed understanding of risk who use tools like ASAP to keep the mission going safely. Fortune tellers aren't the magic; Airmen are the magic. Let's Go!

[1] Our very own Flight Safety Chief, Lt Col Jason Knab, wrote an excellent piece on fatigue and human performance in the Summer 2024 edition of *The Mobility Forum* – check it out at **https://themobilityforum.net/wp-content/uploads/2024/05/TMF_Summer2024_051524-508.pdf**.

[2] Also known as the Aviation Safety Action Program, ASAP is transitioning to the SAFEREP program soon. It is currently accessible to all Airmen via **https://asap.safety.af.mil** (no CAC required).

Flood relief items bound for Pakistan are loaded onto a C-17 Globemaster assigned to the 379th Air Expeditionary Wing, September 9, 2022 at Al Dhafra Air Base, United Arab Emirates. The 380th Expeditionary Logistics Readiness Squadron worked hand in hand with Airmen from the 816th Expeditionary Airlift Squadron to load more than 90,000 pounds of humanitarian aid bound for Pakistan.

USAF photo by TSgt Jeffrey Grossi

Tempo Triumph:
How AMC Airmen Sustained Speed in Pakistan's Flood Crisis

BY MRS. LAUREN FOSNOT, STAFF WRITER

In the wake of natural disasters, rapid response can mean the difference between life and death for affected communities. Recognizing this need for urgency, Air Mobility Command (AMC) Airmen, in the face of hurdles, worked tirelessly "at tempo"—a term used by AMC Commander Gen Mike Minihan to describe the swift pace of operations—to provide lifesaving sustainment for thirty-three million Pakistanis, whose country was afflicted by catastrophic floods in 2022.

The Air & Space Forces Association recognized this feat at the 2023 Air, Space & Cyber Conference by awarding AMC's 14th Airlift Squadron the Berlin Airlift Veterans Association Humanitarian Airlift Mission of the Year Award. Col Sam "Lurch" Todd, Commander of the 437th Airlift Wing, accepted the honor on behalf of his deployed squadron for the seven-day, sixteen-mission humanitarian response in which twenty million pounds of humanitarian supplies were delivered.

The Mobility Forum spoke with Lt Col Daniel Naske, current Commander of the 14th Airlift Squadron and a C-17A Globemaster III Weapons Officer at Joint Base Charleston, SC, to gain insight into the noteworthy AMC mission.

Amidst the Pakistani crisis, Naske was Commander of the 816th Expeditionary Airlift Squadron stationed at Al Udeid Air Base in Qatar. The unit was the only forward-deployed C-17 squadron in the world at the time and was largely in charge of operations in the U.S. Central Command area of responsibility (AOR). It was evident, toward the end of August through early September 2022, that C-17s were needed to provide relief to the people of Pakistan after the devastating floods.

"With the C-17 being a strategic and tactical airlift platform that can travel vast distances and deliver supplies across the world, this aircraft was ideal to help out in this situation," he explained.

Lt Col Daniel Naske, 14th Airlift Squadron Commander and C-17A Globemaster III Weapons Officer, at Joint Base Charleston, SC.

USAF Photo

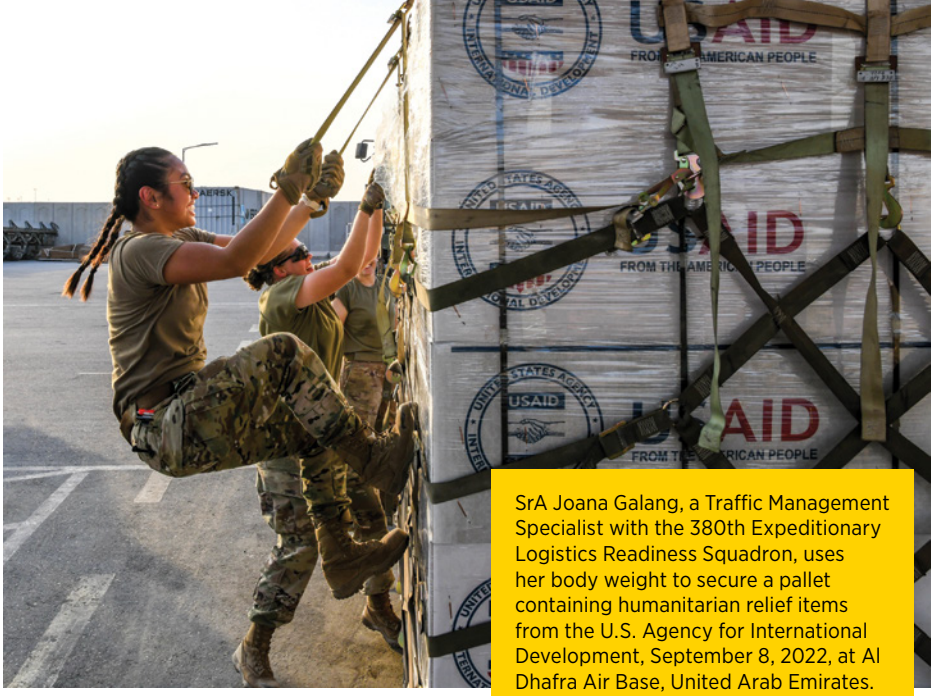
When the Commander received notice that his squadron of nearly 115 Airmen would be needed for the humanitarian effort, he immediately tasked his team with preparing for the challenges ahead. The logistics of traversing Pakistan airfields would be daunting as the airfields are typically small with tight taxiways and had not been accessed by U.S. forces in more than a decade. The squadron diligently studied airfield layouts, airspace regulations, and approach procedures to ensure safe and precise

operations. Amidst ongoing activities in the AOR, the squadron juggled multiple priorities, flying three to four missions daily with five airplanes. He also recognizes the aircraft maintainers who kept the planes running during that busy time. "It was an eighty percent mission capable rate, which is better than any airplane in the fleet," he stated. "They did an excellent job."

In the meantime Naske flew Vice Admiral Brad Cooper, then-Commander of the U.S. Naval Forces Central Command, U.S. 5th Fleet, to Northern Pakistan to meet with the Pakistani government and the U.S. Department of State to organize permissions for U.S. forces to enter the country. The Pakistani government permitted the United States to fly into their airfields and start preparing to receive humanitarian supplies. The aid was from the U.S. Agency for International Development (USAID), an independent agency of the U.S. government primarily responsible for administering civilian foreign aid and development assistance. The supplies ranged from kitchen sets and temporary tents to food, water, and other essential goods. Naske flew the head of USAID on a C-17 to oversee this effort. There, in the flooded country, Naske witnessed how desperately these supplies were needed by the Pakistani people.

"Their homes [were] gone, their businesses [were] gone, they [had] nowhere to sleep. Everything was mud. It was terrible to see," he said. "The supplies served to help people survive until they could rebuild and get a sense of normalcy back."

He further explained what made the mission extraordinary: the tempo sustained by the Mobility Airmen—a factor keyed in on within Minihan's The Mobility Manifesto. While Minihan's tempo references relate to the future fight, Naske shared his belief that tempo applies to combat as well as



SrA Joana Galang, a Traffic Management Specialist with the 380th Expeditionary Logistics Readiness Squadron, uses her body weight to secure a pallet containing humanitarian relief items from the U.S. Agency for International Development, September 8, 2022, at Al Dhafra Air Base, United Arab Emirates.

USAF photo by TSgt Jeffrey Grossi

Mobility missions across the board—from aeromedical to humanitarian aid. In other words, if Mobility Airmen are executing a mission, they will be operating at tempo. To ensure this pace, Naske already had his crews operating on Bravo status, which meant they were on alert and ready for the call. "From flash to bang, from notification to execution, it was about twenty-four to forty-eight hours," he stated. "We exploded into the theater to help the millions of people who were displaced."

Another remarkable feat was how safe the missions were. According to Naske, 1.4 million pounds of humanitarian aid were transported by his squadron in six days without a single safety incident. "No one was hurt, and there was no damage to any of the aircraft," he said. "The way that they were able to do all of that in a professional and safe manner was inspiring."

He says his squadron had three tenets in mind: Be safe, take care of each other, and execute the mission well. He instilled these same tenets in his team as Commander of the 816th Expeditionary Airlift Squadron and still encourages impeccable standards as Commander of the 14th Airlift Squadron.

When asked if he witnessed Mobility Airmen acting as Multi-Capable Airmen, Naske replied, "Absolutely." In fact, one of his aircraft loadmasters, SSgt Abby Beachnau, helped drive one of the forklifts to help one of the Pakistani forklift operators get behind the aircraft to move pallets.

Naske shared that observing the impact of humanitarian relief on the people of Pakistan was an important motivator for many Airmen. He also admires the planners and other personnel behind the scenes who worked equally hard despite not directly witnessing the effects of the aid, like he and others had.

For all of those involved, the Commander wanted to share a very touching moment—he recalls an instance in which a Pakistani military liaison called on the radio to state that the people of Pakistan were forever grateful to the men and women of the U.S. military for delivering aid to their country. For Naske, this moment reminded him of the humanity of the entire situation. "It was human beings helping human beings through a time of crisis," he said. "I thought that was just a beautiful thing, and I'll never forget it."

As the world continues to grapple with humanitarian crises, Mobility Airmen will be available. They will remain trained, ready, and willing to continue the tempo.

Safety Enterprise Announces New Mission, Vision, Goals in 2024 Strategic Plan

BY HEADQUARTERS, AIR FORCE SAFETY CENTER PUBLIC AFFAIRS

The Air Force Safety Center released a new strategic plan, outlining new goals and focus areas to align with U.S. Department of the Air Force (DAF) priorities.

The DAF Safety Strategic Plan establishes the requirements for the enterprise to achieve its vision in support of National- and Department-level guidance. The plan will be used to identify resource requirements, prioritize activities, align the workforce, and provide the insights necessary for safety professionals to make decisions at their level as appropriate.

The new mission statement, *"Increase combat power through Risk Management, Training, and Analysis,"* highlights the need to exploit the latest technology tools and professional expertise to analyze mishaps and operational trends, building support for risk-informed decisions at all levels of leadership. The new vision, *"An operational force maximizing readiness in any environment,"* acknowledges the DAF is foremost an operational force responsible for defending our homeland and national interests against our adversaries.

"As safety leaders, it's our job to ensure the safety enterprise is trained, agile, and ready to integrate new Air Force operational concepts to deter, and if needed, defeat great power competitors," said Maj Gen Sean Choquette, DAF Chief of Safety and Air Force Safety Center Commander. "Safety's job is to prepare our forces with the resources and skills to make risk-informed decisions at home or in combat."

The strategic plan outlines six goals safety will prioritize going into the future:

- **Fully integrate risk management into all training and operations.** Ensure safety principles and risk management are infused into all facets of planning, preparation, execution, and assessment.
- **Integrate risk management into agile combat operations.** Develop and deploy the tools and training needed to help make informed risk decisions in ACE and future operating concepts.
- **Evolve support to the space enterprise.** Develop and implement plans, policies, and engagements to evolve support to the growing space enterprise.
- **Strengthen nuclear surety.** Continue ensuring nuclear safety and surety, as well as weapons mishap prevention, explosive safety risk management, and system safety and design certification is robust, comprehensive, and responsive.
- **Optimize analytical ecosystem and data fabric.** Employ emerging and innovative technology tools to provide predictive, and eventually prescriptive, analytical products to drive risk-informed decisions to operational commands across the DAF.
- **Evolve and modernize the safety workforce.** Evolve DAF Safety University, creating courses that touch on Air Force and Space Force safety, and employ modern training methods and tools.

The strategic plan also described risk management and the role it plays in the safety enterprise.

Although there are inherent risks in all the DAF does, DAF safety incorporates policy development, systems acquisitions and testing, operational procedures, and data analysis to manage that risk and to support our Airmen and Guardians. Risk Management is not evaluating risk and deciding whether or not to take action. Combat requires action. Risk management entails utilizing an assessment and decision process to determine how to best mitigate risk in execution of the mission.

As part of the commitment to follow through, the DAF safety enterprise will be engaged and involved in both the execution and oversight of this strategy. To succeed, the strategic plan must be executed, tracked, assessed, adjusted, and evaluated. This iterative process will drive information and analysis upward to ensure tactical execution achieves planned strategic outcomes.

Choquette also described why safety and these focus areas are important. "Safety is an operational imperative," he said. "Our work directly impacts Airmen and Guardians every single day. Ultimately, our safety mission relies upon the disciplined approach of individual Airmen and Guardians—they are the key component in our enterprise."

Operationalizing Safety Risk Management: A Comprehensive Approach

BY KEVIN SLUSS, CSP, AMC FLIGHT SAFETY

AIR MOBILITY COMMAND FLIGHT SAFETY

Safety risk management is a critical aspect of any organization, particularly those operating in industries where safety is paramount, such as aviation, healthcare, and nuclear power. It involves identifying potential hazards, assessing the associated risks, and implementing measures to mitigate or eliminate those risks. However, the effectiveness of safety risk management depends heavily on how well it is operationalized within an organization. This article explores the concept of operationalizing safety risk management and examines its key components, challenges, and best practices.

UNDERSTANDING SAFETY RISK MANAGEMENT

Before delving into operationalizing safety risk management, it is essential to understand its foundational principles. Safety risk management typically follows a systematic approach consisting of several key steps.

1. **Hazard Identification:** This step involves identifying potential sources of harm within the organization's operations. Hazards can range from equipment failures to human error to environmental factors.

2. **Risk Assessment:** Once hazards are identified, the next step is to assess the risks associated with those hazards, which involves evaluating the likelihood of an adverse event occurring and the potential severity of its consequences.

3. **Risk Control:** Based on the risk assessment, measures are implemented to control or mitigate the identified risks. This process may include engineering controls, administrative controls, or using personal protective equipment.

4. **Monitoring and Review:** Safety risk management is an ongoing process that requires continuous monitoring and review, which ensures that control measures remain effective and relevant in the face of changing circumstances.

OPERATIONALIZING SAFETY RISK MANAGEMENT

Operationalizing safety risk management involves integrating it into an organization's day-to-day operations. It goes beyond simply having policies and procedures in place; it requires a cultural shift in which safety is prioritized at all levels of the organization. Several key components are essential for successfully operationalizing safety risk management, including—

1. **Leadership Commitment:** Effective safety risk management starts at the top. Organizational leaders must demonstrate a commitment to safety and provide the necessary resources to support risk management initiatives. This process includes allocating funding for training, personnel, and safety equipment.

2. **Clear Policies and Procedures:** Organizations should have clear and comprehensive policies and procedures governing safety risk management. These documents should outline roles and responsibilities, as well as the steps to be followed in identifying, assessing, and controlling risks.

3. **Training and Education:** Employees at all levels of the organization should receive training on safety risk management principles and practices. This initiative includes training on hazard identification, risk assessment techniques, and the proper use of safety controls.

4. **Effective Communication:** Open and transparent communication is essential for effective safety risk management. Employees should feel comfortable reporting hazards and near misses without fear of reprisal. In addition, communication channels should be established to disseminate important safety information throughout the organization.

5. **Risk Reporting and Analysis:** Organizations should have mechanisms in place for reporting and analyzing safety risks. This procedure may involve incident reporting systems, safety audits, and regular risk assessments. Data collected through these mechanisms can help identify trends and areas for improvement.

6. **Continuous Improvement:** Operationalizing safety risk management is an iterative process that requires a commitment to continuous improvement.

Organizations should regularly review their safety practices and procedures, seeking feedback from employees and incorporating lessons learned from past incidents.

CHALLENGES IN OPERATIONALIZING SAFETY RISK MANAGEMENT

Although operationalizing safety risk management offers numerous benefits, it also presents several challenges that organizations must overcome, including—

1. **Complacency:** In industries where safety is perceived as a priority, there is a risk of complacency setting in. Employees may become relaxed in following safety protocols, leading to an increased risk of accidents and injuries.

2. **Resource Constraints:** Implementing effective safety risk management requires resources, including time, money, and personnel. Smaller organizations or those operating on tight budgets may struggle to allocate sufficient resources to safety initiatives.

3. **Resistance to Change:** Operationalizing safety risk management often requires a cultural shift within an organization. Resistance to change from employees accustomed to existing practices can hinder progress.

4. **Complexity:** Safety risk management can be complex, particularly in industries with numerous hazards and regulatory requirements. Organizations may need help to develop and implement comprehensive risk management strategies.

BEST PRACTICES FOR OPERATIONALIZING SAFETY RISK MANAGEMENT

Despite these challenges, several best practices can help organizations effectively operationalize safety risk management. Best practices include—

1. **Engaging Employees:** Employees are often the first line of defense against safety risks. Engage them in the risk management process by soliciting their input, providing training, and recognizing their contributions to safety.

2. **Using Technology:** Leverage technology to streamline safety risk management processes. This endeavor may include using incident reporting software, risk assessment tools, and data analytics platforms to identify trends and patterns.

3. **Benchmarking:** Learn from the experiences of other organizations by benchmarking against industry best practices. Participating in industry associations and networking with peers can provide valuable insights into effective risk management strategies.

4. **Promoting a Reporting Culture:** Foster a culture in which employees feel comfortable reporting safety concerns without fear of retribution. Encourage open communication and ensure that reports are promptly investigated and addressed.

5. **Investing in Training and Development:** Provide ongoing training and development opportunities for employees at all levels of the organization, including training on safety procedures and leadership development programs to cultivate a safety-focused culture.

CONCLUSION

Operationalizing safety risk management is essential for organizations looking to prioritize safety and minimize the risk of accidents and injuries. By integrating risk management principles into their day-to-day operations, organizations can create safer work environments, protect their employees and assets, and ultimately enhance their long-term sustainability and success.

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MISSION PRESSURE—
Understanding the Motivation and Its Pitfalls

BY MR. SEAN A. BORDENAVE, AMC HQ/A3TO

Although we may not recognize the term "mission pressure," we can probably remember situations in which we felt mission pressure. Here is an Airman Safety Action Program (ASAP) excerpt that will help describe mission pressure:

> *After engine start, Lead encountered a maintenance issue, shut down, and turned the jet over to maintenance personnel.* ***To preserve training, the crew swapped to the number 3 aircraft, and the number 3 crew moved to the broken aircraft with the intent to rejoin later in the sortie if the maintenance problem could be fixed. The maintenance problem was able to be fixed within an hour, giving us as the number 3 crew the opportunity to rejoin if we hurried and launched… This was a classic case of hurrying to meet an objective…***
>
> ASAP #29700 Excerpt

Sound familiar? Mission pressure is that overwhelming desire for mission accomplishment and the pressure we feel (real or perceived) to get it done. The motivation for mission accomplishment is not necessarily a misplaced motivation. However, pitfalls are associated with our overwhelming desire to "hack the mish" when it leads to rushing, not following procedures, or negative behaviors that accept unnecessary risk.

UNDERSTANDING OUR MOTIVATION FOR MISSION SUCCESS

Mission success is trained in us from day one in the military. We are warriors, and our ethos demands mission accomplishment. Our culture reinforces that positive behavior with unit mottos, recalling famous historical battles, slang sayings such as "hacking the mish," and a competitive atmosphere that guarantees we will respond with that same aggressive spirit in a contingency operation. Of course, the intent and culture behind our motivation for mission success is right and just. We have sworn an oath to support and defend our constitution and our way of life.

SO, WHAT IS THE DOWNSIDE?

Although our drive for mission success is a well-intended motivation, the downside is the pressure aspect. As we have seen in major exercises and famous historical battles, things do not always go according to plan—thus, the adage of Murphy's law: "Anything that can go wrong will go wrong and at the worst possible time." Sometimes, our response to mission challenges or issues, especially short-notice ones, is reactionary rather than the deliberative steps needed to resolve them. The pressure to fix or resolve issues, to "hack the mish," becomes a negative influence, which creates an opportunity for error and mishap.

Although we might not recognize it, mission pressure is quite often observed during preflight duties. To understand why mission pressure is more prevalent during preflight duties, we must remember that a mission is a "team sport," with functional areas working together to launch a mission. Mission launch is a herculean effort that must come together in a schedule of events, culminating at launch time. When things go wrong, we feel the pressure to react to keep the mission moving forward.

THE PITFALLS OF MISSION PRESSURE

As you might guess, rushing is the negative behavior we often experience when faced with a time crunch. Time pressure quite often results in negative behaviors, errors, and, ultimately, the increased risk of a mishap. More importantly, rushing is not unique to military operations. It is a human response when put under pressure. Returning to the ASAP in our introduction, we see how mission pressure can lead to errors:

> *We were launching on a 3-ship training flight from home station during daytime with good weather to conduct low-level threat training. Lead and 2 were the primary aircraft for training, and the number 3 aircraft*

Airmen from the 141st Air Refueling Wing run to a KC-135 Stratotanker during a simulated alert response at Fairchild Air Force Base, WA, June 1, 2024.
USANG photo by SrA Anneliese Kaiser

had a basic crew of 2 instructor pilots and an instructor loadmaster only to provide the third aircraft. After engine start, Lead encountered a maintenance issue, shut down, and turned the jet over to maintenance personnel. ***To preserve training, the crew swapped to the number 3 aircraft, and the number 3 crew moved to the broken aircraft with the intent to rejoin later in the sortie if the maintenance problem could be fixed.*** ***The maintenance problem was able to be fixed within an hour, giving us as the number 3 crew the opportunity to rejoin if we hurried and launched.*** *The preflight was already complete and our mission computer was already built, meaning all we needed to do was start engines and launch and we could meet the 2-ship halfway through their profile. We pressed forward and started engines.* ***After starting the number 4 engine, the PM [Pilot Monitoring] felt the aircraft move forward and stepped on the brakes. At the same time the loadmaster on [the] ground said "hey! you're moving!" In total the aircraft moved 6–8 feet forward with the loadmaster and ground maintenance personnel in front of the aircraft. We had failed to ensure the parking brakes were set, per the checklist…***

This was a classic case of hurrying to meet an objective leading to complacency, a lapse in checklist discipline*…setting the parking brakes is one of the first steps taken when pre-flighting the C-17.* ***Since the preflight was already complete, OF COURSE the parking brakes were set, or so we very incorrectly assumed getting in the seat, failing to realize that the parking brakes had been released as a part of the maintenance performed.*** ***When we reached the "Parking Brakes" step of the "Before Starting Engines Checklist," we made the correct verbalizations, but in our desire to hurry, we continued our bad assumption and failed to accurately check the parking brakes or verify the annunciation on the WAP [Warning Advisory Panel].***

ASAP #29700 Excerpt

Even though we might think we are "cool under pressure," it is not always true. A March 1993 article titled *Hurry-Up Syndrome* was an adaptation of a research study that examined 125 Aviation Safety Report System reports, with events involving time-related problems.

We define Hurry-Up Syndrome as any situation where a pilot's human performance is degraded by a perceived or actual need to hurry or rush tasks or duties for any reason. These time-related pressures include the need of a company agent or ground personnel to open a gate for another aircraft, pressure from ATC [Air Traffic Control] to expedite taxi for takeoff or to meet a restriction in clearance time, the pressure to keep on schedule when delays have occurred due to maintenance or weather, or the inclination to hurry to avoid exceeding duty time regulations.
https://asrs.arc.nasa.gov/publications/directline/dl5_hurry.htm

The analysis's results showed that "a large majority of incidents (sixty-three percent) had their origins in the preflight phase of operations," which resulted in errors. Ultimately, the study showed a clear correlation between rushing (pressure—real or perceived) and errors.

Beyond the increased potential for errors, mission pressure can also lead to intentional deviations from procedures, better known as "workarounds" or "shortcuts." To save time, crews may intentionally deviate from checklist protocols or technical order procedures, such as one pilot doing the entire interior preflight check, including steps calling for both pilots to accomplish certain tasks, or from flight management system (FMS) cross-verification procedures in which one pilot loads and checks the FMS flight plan. These intentional deviations might save time, but they also increase the possibility of those deviations becoming the norm (or bad habits).

The final pitfall of mission pressure is accepting ***unnecessary*** risk. To be clear, risks are inherent in flying aircraft and executing military missions. The concern is when we accept risk that is not commensurate with our mission directives or tasks, thus accepting unnecessary risk. Assessing risk requires a deliberative and logical decision-making process. Unfortunately, mission pressure can negatively impact decision-making as our need to act quickly (impulsively) overwhelms our otherwise methodical decision-making process.

Ultimately, mission pressure can be counterproductive to our well-intentioned desire for mission success. A mishap is a mission failure through our misdeeds. Previous aviation mishap investigations have cited rushing as a contributing factor. The investigation into the worst aviation mishap—in which two 747s collided on the runway in Tenerife, Canary Islands, in March 1977—revealed that duty concerns for the Royal Dutch Airlines (KLM) crew and weather delays due to fog contributed to the KLM and Pan Am crews rushing to depart the airfield (Flight Safety Foundation, Human Factors & Aviation Medicine, September/October 1993 **https://flightsafety.org/hf/hf_sep-oct93.pdf**).

2Lt Jace Waters, 6th Logistics Readiness Squadron Air Transportation Officer in Charge, directs cargo movement during exercise Explode into Theater (EXPLODEO) 2024 at MacDill Air Force Base, FL, May 29, 2024.

USAF photo by SrA Lauren Cobin

MANAGING MISSION PRESSURE

Although we should all strive for mission success, we need to be mindful when mission pressure becomes a negative to mission accomplishment. Consider the following techniques to manage those situations in which mission pressure can become a negative influence on performance:

Mission planning and analysis. Deliberate and thorough mission planning provides an opportunity at "ground speed zero" to examine the mission task and ensure the operation has been properly evaluated and resourced. In addition, mission planning allows for the opportunity to anticipate possible threats and potential errors and devise contingency plans, which help reduce mission pressure.

Mission priority and risk assessment. Not all our missions are the "zero fail option." Thus, we need to keep the mission we are performing in the proper context. Mission priority codes help us assess and manage the risk during decision-making. A high-priority contingency mission might require additional risk, but we should not consider or accept that same level of risk with a training mission that can be done tomorrow. Keep the mission priority in context when evaluating the situation.

Our technical order procedures are contingency procedures. Be careful justifying procedural deviations or shortcuts in the name of "mission accomplishment." Technical order procedures are the contingency procedures. We utilize and train to those procedures every day. How much time will you really save with shortcuts? The antidote to rushing and errors is procedural discipline.

"Slow is smooth, and smooth is fast." Fight the urge to rush! When we feel the "pinch" to act, it is our negative reaction to time pressure. Rushing leads to errors and jeopardizes mission success. Just remember, "slow is smooth, and smooth is fast!"

Good Crew Resource Management (CRM) keeps mission pressure in check. CRM is our countermeasure to rushing. When you see your crew rushing, ensure your crew recognizes the mission pressure. Speak up with assertive statements, and do not allow mission pressure to lead to errors or poor decision-making.

AIR MOBILITY COMMAND

WELL DONE AWARD

Presented to

SSgt Alex J. Santiago

89th Airlift Wing, Joint Base Andrews, MD

SSGT SANTIAGO dedicated fifty-six hours to mitigating asbestos exposure for three hundred members across three squadrons. During foundation repairs on the 89th Airlift Support Group building, floor tiles disturbed in the process tested positive for asbestos. SSgt Santiago took the initiative and collaborated with three base agencies for protective surveys, medical reporting, and hazard prevention procedures to identify the appropriate personnel contacts, minimize potential exposure, and reduce future loss of life. He led five meetings with group leadership to elevate hazard awareness, which propelled the notification to over three hundred individuals on the exposure vulnerability. He volunteered to be the first member to undergo chest X-rays to define the process for all other members to receive the appropriate medical documentation and treatment.

Tactical Vehicle Safety

BY SSGT LAUREN DOUGLAS, AIR FORCE SAFETY CENTER PUBLIC AFFAIRS

A 353d Special Operations Support Squadron Deployed Aircraft Ground Response Element Airman practices maneuvering a side-by-side during an Air Force Special Operations Command Tactical Vehicle Chief Instructor Course at Kadena Air Base, Japan.

USAF photo by Capt Jessica Tait

Department of the Air Force (DAF) personnel operate a wide variety of vehicles to execute our missions. Transportation professionals operating in land, air, space, and water domains must adhere to safe practices and strict standards.

A vehicle becomes a tactical vehicle, or military-designed vehicle, once it is designed for field requirements in combat, training personnel for tactical operations, or developed under military contract. Utility vehicles (UTVs) are versatile, all-terrain vehicles that come in different models and sizes and can handle various tasks and terrains. All-terrain vehicles (ATVs) and UTVs are both off-road vehicles but have different capacities and features. ATVs seat one, are designed for off-road excursions, and offer a wider range of uses, while UTVs seat up to six, are designed with more advanced on-road features, and are more stable and comfortable.

"Tactical vehicle safety is highly important because it's part of the full readiness picture," said Michael E. Eckert, Traffic and Safety Outreach Manager for the Air Force Safety Center. "Reducing tactical vehicle mishaps helps increase DAF readiness for both personnel and equipment."

As the Traffic and Safety Outreach Branch Chief, Eckert is responsible for providing guidance, oversight, and recommendations to avoid and prevent mishaps caused by human error. His branch also reviews tactical vehicle lesson plans for best instruction and training.

According to the Department of Defense, a mishap is an unplanned event or series of events that result in damage to DoD property or public property. This includes illness or injury to military, civilian, or non-DoD personnel caused by DoD activities.

In fiscal year 2023, there were twenty reported tactical vehicle mishaps resulting in forty-nine injuries and one fatality. In the previous year, FY 2022, there were twenty-six mishaps on record with twenty-four injuries and no fatalities. Following all safety guidelines and wearing manufacturer-recommended personal protective equipment while driving off-road

A 320th Special Tactics Squadron Airman practices maneuvering a dirt bike during the Air Force Special Operations Command Tactical Vehicle Chief Instructor Course at Kadena Air Base, Japan.

USAF photo by Capt Jessica Tait

vehicles can reduce or eliminate injuries or death.

DoD Motor Vehicle and Traffic Safety instructions state that operators must adhere to the manufacturers' personal protective equipment (PPE) and operating recommendations, as well as federal, state, or host-nation regulations when operating on public roadways, if they do not meet the design requirements for public roadway use. (DODMVTS Requirement 3.1.c and DAFI 91-207, 5.2)

PPE for vehicle safety may include helmets, eye protection, foot protection, protective clothing, and extremity/joint protection. Some PPE also demands extended requirements that include standards and markings that mandate labels and identifiers. Seatbelts are also crucial on UTVs. Harness-style seatbelts can provide better restraint during aggressive riding or in a mishap, enhancing passenger safety.

For vehicle PPE specification, recalls, and operational mandates, visit the Driving Off-Road Vehicle Safety page.

In addition to formal training, there are operational checklists and templates for the use of vehicles. Some instructions outline guidance for every use, while other instructions are for less frequent or specialized use. Consistently following operating instructions reduces risk of mishaps and creates a safer environment for all.

"We have seen a twenty-three percent decrease in mishaps involving tactical vehicles but an increase in minor injuries," said Eckert. "The increase in injuries appears to be from a few multiple vehicle mishaps that occurred during convoy operations."

Safety is everyone's responsibility. Remain vigilant, especially when near or operating tactical vehicles. Follow precise instructions and trainings to ensure excellent outcomes for all.

FOR MORE INFORMATION

https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605504p.pdf

https://www.safety.af.mil/Divisions/Occupational-Safety-Division/Driving-and-Roadway-Safety/Off-Road-Vehicles/

The pack of a student training to become a Survival, Evasion, Resistance, and Escape specialist sits on the ground during a ruck march at Camp Bullis, Texas.

USAF photo by Capt Jose Davis

Survival, Evasion, Resistance, and Escape Training

BY MR. TERENCE M. MULLIGAN, STAFF WRITER

It is one thing to be a great pilot or aircrew member—you strive for excellence on any mission and aim to serve with professionalism and honor. However, expertise at your assigned task is only part of the equation. It is another thing when the unforeseen happens—if an aircraft is shot down or suffers a malfunction and the crew is forced to eject over enemy territory, into a body of water or harsh climate, becoming isolated personnel (IP) to survive until rescue crews can bring them back to safety.

That is where Survival, Evasion, Resistance, and Escape (SERE) training comes in. This training is essential for all military and civilian personnel so they are prepared for any contingency. Evading capture is obviously a top priority, but broader survival skills also come into play. Enemy forces may not be the only danger to a downed Airman. Extreme climate conditions (e.g., frigid arctic mountain or arid desert environments) also threaten personal safety and recovery.

What are the best practices for improvising shelter for the situational environment? What is the best approach for self-administering first aid after an injury? How can you stave off hunger and thirst? How can you manage fatigue or psychological stress? SERE training offers a comprehensive approach to these and other risks. As described in the SERE guidebook (AF Handbook 10-644) for IP, the assigned mission is to "return to friendly control without giving aid or comfort to the enemy, to return early and in good physical and mental condition." In a combat situation or in enemy territory, the phrase "without giving aid or comfort to the enemy" is crucial and expected as part of the Code of Conduct.

Observing one's environment may lead to useful resources for survival. For example, are there plants or animals nearby that can provide nourishment? At the same time, you must also ask, are there any dangerous animals to avoid? Are dry branches, leaves, or logs available for making a fire for cooking and warmth? Do you have the resources to make a lean-to shelter? How can you estimate your latitude and longitude or determine your exact location without a compass or map, as the proper use of signal flares, smoke grenades, and radio equipment may eventually lead to rescue? Some of the survival skills covered in SERE training can be beneficial even without experiencing an emergency. Plus, the training can boost a pilot or crew member's confidence, knowing that they have the wherewithal to survive a variety of emergencies.

Personnel are appreciative of the knowledge gained during SERE training. "I'm learning how to make a fire…I never made a fire before," said Britney Jaworski, 418th Flight Test Squadron. Instructors are appreciative, as well, of being able to impart such valuable information. "Knowing we provide training that could save someone's life, but hope they never have to use it, is one of the most rewarding things in this job," said Tech Sgt. Timothy Emkey, 366th Fighter Wing SERE specialist. With SERE training, personnel gain the tools to survive physically and psychologically, and to "return with honor."

Survival, Evasion, Resistance, and Escape instructors and trainees participate in the SERE Specialist Training Orientation Course, Sept. 21, 2021, at Joint Base San Antonio-Camp Bullis, TX.

USAF photo by Brian G. Rhodes

AIR MOBILITY COMMAND

WELL DONE AWARD

Presented to

the Joint Base Charleston Crash Damaged or Disabled Aircraft Recovery and Airfield Management Team

The Air Mobility Command (AMC) Well Done Award is presented to the Joint Base (JB) Charleston Crash Damaged or Disabled Aircraft Recovery (CDDAR) and Airfield Management team in recognition of their outstanding performance responding to the Charleston County Sheriff's Department helicopter crash on JB Charleston. On August 1, 2023, the Charleston CDDAR and Airfield Management team swiftly responded to the crash site within six minutes of the in-flight emergency declaration by the pilot. The pilot was wounded in the crash and taken to the hospital, where he was treated for minor injuries. The JB Charleston team worked with first responders, the National Transportation Safety Board, and the international airport to minimize disruptions to flight operations to less than ninety minutes. The team removed twelve thousand pounds of debris for a safety investigation analysis while avoiding injury to all responders. Such actions swiftly restored flight operations to a joint-use field that services 118,000 military and commercial flights per year and enabled a Presidential support mission to depart immediately after reopening runway operations. The safety awareness and risk management tactics exhibited reflect great credit on the JB Charleston CDDAR and Airfield Management team, AMC, and the United States Air Force.

Misinformation … or Manipulation?

Why Mobility Airmen Must Approach AI Advancements with Caution

BY MRS. LAUREN FOSNOT, STAFF WRITER

Do you have a minute? Great. Step into this time machine and press this button. You are now enroute to early 18th century Britain. As you are chauffeured through the most quintessential English villages, please keep your hands and feet in the vehicle—although these folks could certainly use a hand!

Upon arriving, you have most likely noticed that much of the villagers' work is completed manually. Tasks such as farming, making clothing, and forging can be grueling. Thankfully, technological advances would soon drastically improve the villagers' way of life.

Seen enough? What you witnessed was a period just shy of the Industrial Revolution. The period from creating goods by hand to using machines, which started in 1760 in Britain, transformed industries, economies, and entire societies—so much so that historians mark it as one of the most significant eras of human advancement.

While we wish our time machine could visit the future (sorry, beta model!), it can still be predicted that we may be in the midst (or maybe the beginning!) of an era of similar, if not more, significance. Starting with the creation of the internet in the late 20th century, we are now dipping our toe into the vast sea of possibilities of artificial intelligence (AI).

By the way, you can step out of the time machine now—we are back in 2024. AI tools have become increasingly sophisticated, and the potential for misinformation and manipulation becomes more of a pressing concern each day.

The AI tools quickly circulating and gaining popularity are primarily large language models (LLMs)—including ChatGPT, an OpenAI product—that can generate human-sounding text to convey ideas and concepts. "Big tech" companies, such as Google, Microsoft, and Meta, seem to be in a rat race to develop and release the biggest, best, and most novel AI products.

Among the most remarkable AI innovations is the ability to generate images by entering just a few keywords into an LLM. That image of Darth Vader roller skating with Elvis? Sorry, that might not be real. All joking aside, there are many realistic AI-generated images floating around online that go undetected as artificial (often referred to as a "deep fake").

Ethan Mollick, Associate Professor of Management and Co-Director, Generative AI Lab at the Wharton School of the University of Pennsylvania, cautioned his followers about the proliferation of AI-generated images after encountering them at the top of a Google search result.

"It isn't just AI-generated text that is starting to bleed over into search results," Mollick explained. "The main image, if you do a Google search for Hawaiian singer Israel Kamakawiwo'ole (whose version of *Somewhere Over the Rainbow* you have probably [heard]), is a Midjourney creation right from Reddit."

While Google has released a statement about a new tool that may help users differentiate between images that are "real or not," it is important to be wary about anything and everything online—AI has the potential to fly under the radar even to the most discerning eye.

The misuse of AI is certainly a topic to be discussed by U.S. Air Force leadership; however, each Airman can also guard themselves and others against it.

In this modern age, we have more information than we know what to do with and seemingly less time to verify its accuracy. This contrast makes it difficult to navigate online information. Generation Z has been called lazy by older generations, but often, they are just pulled in more directions than existed before. This vulnerability may increase the chance of false content slipping through the cracks.

With AI tools, not only falsities occur but also bias. For example, there have been instances of evidence of racial bias found in AI algorithms used in healthcare, leading to disparities in the allocation of resources. While this example pertains to the medical realm, similar biases could manifest in military applications, affecting recruitment, promotions, and more.

Unintendedly biased information is frightening enough, but what if it is created intentionally? Bad agents could cause mayhem in myriad ways—they already do. An example highlighting this is the 2019 AI-generated deepfake voice scam, where cybercriminals mimicked a CEO's voice to deceive an employee into transferring financial funds from the company's account into a fraudulent one.

Further, Microsoft recently released word that the technology company detected and disrupted instances of U.S. adversaries using or attempting to exploit generative AI. NYU professor and former AT&T Chief Security Officer Edward Amoroso believes this could snowball, and that malicious use of generative AI "will eventually become one of the most powerful weapons in every nation-state military's offense."

The misuse of AI is certainly a topic to be discussed by U.S. Air Force leadership; however, each Airman can also guard themselves and others against it. Below are a few "dos and don'ts" surrounding navigating the cyber world safely.

DO:

- Think about who would benefit from spreading confusing information.
- Fact check. The Washington Post's Fact Checker, Snopes, and PolitiFact are a few sites used for fact-checking information circulating online.
- Look for telltale signs that images and videos were generated by AI, including jumbled-up text, hands with too many fingers, eyes that do not synch up with movement, blurry or distorted details, an overly glossy appearance, and more.
- Utilize an AI-generated content checking tool.
- Encourage the establishment of a code of ethics.

DO NOT:

- Upload sensitive information as it would be available to all users of an LLM, including adversaries.
- Assume information generated is factually correct.
- Share or publish information before verifying it as true.
- Avoid exploring AI tools. Learning how they work is the best way to safeguard yourself and sensitive information.

Yes, the future setting on the time machine would be a nice button to push right now. Unfortunately, no one knows how this revolution will play out. With AI's ability to widen its reach exponentially, there could soon be unfathomable advancements (and consequences!). Just as the villagers shortly before 1760 were to be introduced to new tools, they would have no idea of the significance of the tools on human history.

AI tools offer both excitement and fear. In light of the challenges, Mobility Airmen must approach AI advancements with a critical eye and a commitment to ethical conduct. Embrace them, but embrace them cautiously.

Capt Katie Parker, a Combat Systems Officer assigned to the 15th Special Operations Squadron at Hurlburt Field, FL, shared her story of how recent Air Force policy changes allowed her to continue flying during her pregnancy. Aircrew are now able to voluntarily request to fly through all three trimesters of their pregnancy.

USAF photo by SrA Natalie Fiorilli

Cultivating a Culture of Safety and Inclusivity:

How Women Are Identifying Potential Barriers and Recommending Solutions for Mobility Airmen

BY MS. LORI HOGAN, STAFF WRITER

According to the 2020 Demographics Profile of the Military Community, nearly 70,000 active-duty women, or 21.1 percent, make up the Air Force. In fact, the Air Force has the highest percentage of women serving across the armed forces. In addition, approximately 95,800 Air Force service members are among a racial minority group. Although the Air Force is making progress, seemingly small gaps exist that can affect the safety, well-being, and readiness of these dedicated Airmen.

In March 2023, The Secretary of the Air Force Office of Diversity and Inclusion hosted the third annual Department of the Air Force Virtual Women's Air and Space Power Symposium on Facebook. Hoping to build connections and share perspectives, the symposium planners were charged with creating an event that not only fueled inspiration but also empowered Airmen and Guardians to chart their future. Members of the Department of the Air Force (DAF) Barrier Analysis Working Group, including the Women's

A member of the 436th Airlift Wing demonstrates how a bun fits into the newly designed unisex bump cap at the Airlift/Tanker Association Conference in Grapevine, TX, Nov. 9, 2023. The new bump cap was created by SSgt Sheila Moody, 436th Aircraft Maintenance Squadron Air Force Repair Enhancement Program Aircraft Structural Journeyman and SSgt Cortnee Madrid, 436th Aircraft Maintenance Squadron Dock Chief.

USAF photo by SSgt Sheila Moody

Initiative Team (WIT), collaborated with volunteers and served as the symposium's advisory group.

"For our Airmen and Guardians to serve to their full potential, we have to foster a positive culture and continue to remove barriers," said Secretary of the Air Force Frank Kendall. "These efforts are part of my call for 'One Team, One Fight.' It is the only way we will recruit and retain the best and unrivaled talent, a necessity to maintain air and space superiority."

Those barriers are best identified by the women and minorities who face gender-specific challenges that their male counterparts often overlook. That is where Reach Athena comes in. This all-women, Airmen-led, Air Mobility Command (AMC) initiative highlights the relationship between diversity and inclusion and its impact on service members' readiness. Their mission is to collaborate and communicate with Mobility Airmen and Air Force senior leaders to identify potential barriers and recommend solutions to female- and family-centric issues that threaten readiness and retention. Their long-term vision is to effect policy change that retains, cultivates, and recruits the next generation of top-tier talent within AMC so it is always ready to respond to any future strategic challenge.

It is not just policies that these groups study but equipment, uniforms, gear, grooming, and other processes. Maj Jennifer N. Walters, who co-founded Reach Athena when she was stationed at Travis Air Force Base (AFB), CA, along with Maj Kelsey Payton, explained, "What we're here for is to identify policies that—intentional or not—are driving our talent away, or repelling them from the Air Force," she said in an interview with the U.S. Department of Defense. Reach Athena—named after the Greek goddess of wisdom and warfare—began in 2020 and is headquartered at Scott AFB, IL.

Another women-centric, forward-thinking group is Rosie's Spirit. SSgt Sheila Moody and SSgt Cortnee Madrid, aircraft structural maintenance and flight line crew members at Dover AFB, DE, founded this initiative. They experienced challenges with the standard-issued bump caps that protect their heads while working on the aircraft. They named their hats after Rosie the Riveter to remember all the "Rosies" of the past, present, and future. WIT and Reach Athena have also supported their efforts.

The underlying goal across these groups and programs is to identify anything that is antiquated or impedes mission success. That means enacting policies designed to intentionally develop those serving today, not holding on to best practices for the sake of tradition or because that is how it was done in the past. Leaders have come to realize that some of the outdated policies disproportionately affect one gender and have empowered groups like WIT, Reach Athena, and Rosie's Spirit to help shape them into a more inclusive protocol. Here are just a few of their successes.

FLIGHT DUTIES WHILE PREGNANT POLICY UPDATE

In the past, if a woman became pregnant she was involuntarily discharged from service. Now, of course, women can continue to serve while pregnant. However, limitations still pertain to pregnant aviators that the barrier analysis groups are examining. Previously, if a woman became pregnant, she was automatically taken off flight status. In April 2022, DAF issued a clarification of policies pertaining to aircrew during pregnancy. Since then, the Department has recognized the need to provide aircrew, commanders, and healthcare professionals with greater awareness of and transparency around the process for submission and review of waivers to fly during pregnancy. The Aircrew Voluntary Acceptance of Risk, or AVAR, is a three-part document (including a risk acknowledgment page, an outline of medical risks, and acceptable flight profiles) designed to ensure aircrew have access to the information that will allow them to make the most informed decisions about whether to continue flying during pregnancy. Aircrew who want to be considered for crewed flight duty must personally request to continue

flying during pregnancy. AVAR will help guide discussions with healthcare providers and inform members of both known and potential, but unmeasured, risks to make informed decisions. The Air Force is now investigating the possibility of allowing aviators with doctor-confirmed "uncomplicated pregnancies" to continue flying longer, which would increase readiness and positively impact culture.

AMC NURSING MOTHERS POLICY

This policy provides a reasonable break time for nursing mothers to express breast milk. Although this seems relatively minor, women were required to clock out to pump unless they could pump on a regularly scheduled break. Men, on the other hand, were given the freedom to take a cigarette break whenever they needed. This discrepancy had a negative impact on mothers, both physically and mentally. Women who do not pump or breastfeed on a regular basis risk engorgement, a painful condition that can lead to infection and other medical complications. The mental frustration came with having to take unpaid time for a medical issue, which created animosity and job dissatisfaction. The new policy took effect in April 2021 and stated, "The frequency of breaks as well as the duration of each break vary according to the needs of the individual employee and mission requirements." Commander Gen Jacqueline D. Van Ovost said, "This policy demonstrates our ability to connect and support our Airmen and families in the workplace." Additionally, it provides a number of benefits to the employer to include increased productivity, organizational loyalty, job satisfaction, and employee retention.

ROSIE'S SPIRIT BUMP CAPS

Bump caps, a regular ball cap with a hard plastic insert, were issued at Dover Air Force Base to prevent head injuries. However, Sheila Moody and Cortnee Madrid found that the hats were creating a safety hazard for females. Most maintainers using power tools must wear their hair in a bun. That hairstyle prevents the bump cap from being worn safely, correctly, and effectively, especially for women with thick hair or women of color who wear their hair in braids. In addition, the Velcro on the strap painfully pulled and ripped their hair out of the bun, leaving it looking messy and unprofessional. They noticed that women would take their bump caps on and off numerous times during a shift, depending on their location, leaving women's heads vulnerable to injury.

A member of the 436th Airlift Wing showcases the newly designed unisex bump cap at the Airlift/Tanker Association Conference in Grapevine, TX, Nov. 9, 2023.

USAF photo by SSgt Sheila Moody

Moody and Madrid took their concerns to the Maintenance Group Commander, Col Bary Flack. "He informed us that the bump caps would not go away, but if we could fix the issue, he would be open to ideas. From that day forward, we have worked hard to make a ball cap fit for women a reality," said Moody.

After a year of designing prototypes and working with multiple companies, they created a female ball cap that not only fixed the issue most female maintainers have but what most military women have. The hat offers a larger opening for most buns and ponytails. They replaced the Velcro with a buckle to avoid snagging hair.

When they took their prototype to the AF Uniform Office team for feedback, they were met with another challenge. They liked the design but were not willing to make two types of caps, one for men and one for women. They would need to design a prototype that would be universal, so back to the drawing board they went.

The new cap still had a large opening for buns and ponytails but was less dramatic than the original design. They added elastic bands to both sides of the OCP straps to allow clearance of different hairstyles, which also made it feel more like a fitted hat on men. Next, they added a satin insert option to accommodate different hair types and prevent hair damage. To adhere to the "one size fits all" theory, they made just two sizes that would fit smaller or larger head sizes. This specific insert did not need to be modified and fit in the new design for bump cap use. Lastly, they found more than 50 percent of the materials to be U.S. made, including the OCP print, mesh material, and the sweatband seam.

The AF Uniform Office approved the new prototype, and it is now being rolled out at Dover and Travis Air Force Bases for testing and research. Reach Athena has helped them through the legal process and has allowed them to share booth space at the Airlift/Tanker Association convention to showcase the hats and conduct surveys. "This has been a great experience," said Madrid. "None of it would have been possible without the help of leadership. They provided us the tools, contacts, and support to ensure our success." Moody said, "We never considered giving up. Each challenge made us more determined. Now, we are setting our sights on making this style of caps available to all U.S. Armed Forces. It may take time, but we remain committed to the safety and well-being of our fellow Airmen."

AIR MOBILITY COMMAND

WELL DONE AWARD

Presented to

the 60th Air Mobility Wing Civilian Fly-In Event Staff

Travis Air Force Base, CA

On August 26, 2023, a dedicated team of professionals distinguished themselves by outstanding achievement when flawlessly executing the Travis Air Force Base (TAFB), CA, Mid-Air Collision Avoidance (MACA) Civilian Fly-In and Safety Seminar. The team also went out of its way to inform Northern California airfields of expected increases in general aviation traffic while generating a public affairs engagement strategy to advertise and cover the event. Furthermore, outreach allowed the Wing Safety Office to partner with the Federal Aviation Administration's Safety Team at the San Francisco Flight Standards District Office to certify the fly-in as a continuation training event. The event staff exceeded their goal of creating a community outreach event that could provide real-world MACA practice for all conditions and phases of flight—they galvanized the sustained vigilance needed to execute in fluid operating environments. Consequently, the event revealed to TAFB operators the value of anticipating congestion or abnormal activity, the limits of one's vision when task-saturated and responding to dynamic airborne threats, and the reality of increased air traffic density and closing speeds—especially with unmanned systems proliferating global airspace. The fly-in also succeeded because its staff sought to create a concrete learning experience that could demonstrate how MACA assures the mission and mitigates a top cause of fatal general aviation accidents.

Combating Chronic Stress: The Power of Physical and Mental Rest

BY MRS. LAUREN FOSNOT, STAFF WRITER

As Mobility Airmen, stress is often a part of the job. Acute stress, or stress that lasts a short time (i.e., minutes to hours), can be beneficial because it can improve one's performance when challenges lie ahead.

Many people have heard of the "fight-or-flight response"—or the activation of the sympathetic nervous system (SNS) that prepares the body to fight or flee from danger. During this process, the SNS signals the adrenal glands to release stress hormones called adrenaline and cortisol. These hormones supercharge the body with energy to accomplish a person's goals—and when the mission stakes are high, this response can be critical.

However, there is a time and place for stress. When the body struggles to return to "rest and digest" mode, profound physical, emotional, and mental health consequences can occur. Chronic stress is a pervasive issue in today's fast-paced world, affecting millions of people worldwide. Unlike acute stress, chronic stress occurs when stressors persist for an extended period—weeks, months, or even years. This type of stress is often from frequent physical or mental pressures.

One of the most significant effects of chronic stress is its impact on physical health. Almost everyone has experienced waking up in the middle of the night due to a problem weighing on their mind. This mental stress interferes with sleep patterns, which further exacerbates stress levels and creates a vicious cycle. Prolonged exposure to stress hormones like cortisol and adrenaline can additionally weaken the immune system, making individuals more susceptible to infections and illnesses. Chronic stress has also been linked to a myriad of health problems, cardiovascular diseases in particular.

Furthermore, chronic stress takes a toll on mental health. Persistent stress can impair cognitive function, making it difficult to concentrate, remember information, and make decisions. Over time, chronic stress may even alter the structure of the brain, particularly in areas responsible for emotions and memory.

Chronic stress not only affects individual well-being but also has broader implications for organizational performance and success.

Could you be dealing with the effects of chronic stress?

- Decreased energy throughout the day.
- Headaches and body aches not related to physical exertion.

Neuroscience research shows that just acknowledging stress can help the body process it more consciously and less reactively.

- Gastrointestinal issues.
- Brain fog, difficulty concentrating, and memory problems.
- Cravings for salty or sugary foods.
- Weight gain, especially around the midsection.
- Irritability or nervousness, or both.

It is easy to develop stressful habits or get into stressful patterns of thinking that lead to chronic stress. If removing your stressors entirely is not possible, as external factors often cannot be controlled, the following stress-reducing habits can make enormous strides toward improvement.

Acknowledge your stress: Neuroscience research shows that just acknowledging stress can help the body process it more consciously and less reactively. Being aware of the effects or signs of stress—such as thinking patterns, breathing, heart rate, and other signs of tension—helps one recognize it when it begins and prevent it from becoming worse.

Get quality sleep: Chronic sleep issues—such as obstructive sleep apnea, insomnia, or working a night shift—are associated with higher cortisol levels. Learning how to improve sleep quality, such as by avoiding blue light at night and going to bed at regular times, can help.

Exercise regularly: Several studies have shown that regular exercise helps improve sleep quality and reduce stress, which can help lower cortisol levels over time. However, excessive exercise can exacerbate the issue. Having rest days factored into a workout schedule is key.

Practice deep breathing exercises: Controlled breathing helps stimulate the parasympathetic nervous system—or the "rest and digest" system, which helps lower cortisol levels.

Eat well: Maintaining a healthy diet can help reduce stress levels.

Socialize: Laughing promotes the release of endorphins and suppresses cortisol. Participating in hobbies and fun activities can also promote feelings of well-being, which may also lower cortisol levels.

Maintain healthy relationships: Having tense and unhealthy relationships with loved ones or even co-workers can cause frequent stress and raise cortisol levels.

Work out underlying trauma and issues: Life can weigh a person down, sometimes without them realizing how much. Talking to a professional can help sort mental tangles and can help individuals develop healthier coping mechanisms, reducing chronic stress overall.

Ultimately, raising awareness about the effects of chronic stress and promoting strategies for stress management is crucial in combating this pervasive issue. Mobility Airmen are tasked with stressful challenges—they move mountains. By prioritizing self-care, seeking support when needed, and making lifestyle changes to reduce stress, individuals can mitigate the harmful effects of chronic stress and improve overall well-being.

Lions and Tigers and Bears, Oh My!

BY MRS. LAUREN FOSNOT, STAFF WRITER

Hiking can mean different things to different people. For some, hiking means leisurely strolling in the great outdoors; for others, it is a steep, uphill trek that gets the heart pumping. Regardless of intensity, many people would agree that hiking is the perfect escape to clear and calm the mind.

Although this peaceful state of mind should be enjoyed, it should not allow for complacency. Recognizing that harmful incidents, such as wild animal attacks, can and *do* occur can add a layer of mindfulness to enjoying the journey.

If you plan to go for a hike, make sure to know the types of wildlife common in your area ahead of time. While smaller wildlife can pose the threat of rabies, larger animals, such as bears, mountain lions, and moose, can cause significant harm. A quick internet search can also reveal how different times of the year and weather conditions impact your likelihood of encountering various creatures. It can also inform you about what habitats these animals prefer to be around, such as valleys, streams, or ponds.

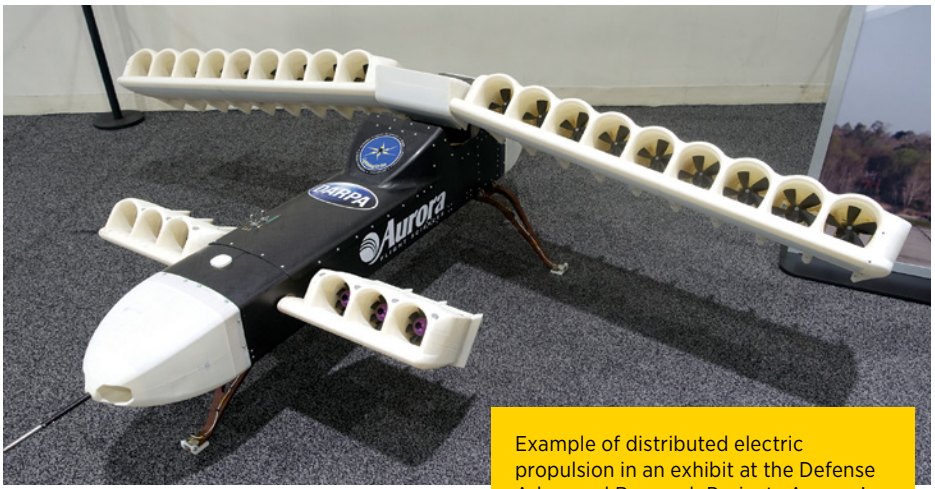
Although preventive measures should be the first step, knowing ahead of time how to dissipate an encounter is also critical, and this process may vary from animal to animal. For example, according to the National Park Service (NPS), one of the most important safety precautions to avoid a bear attack is to make yourself known and not surprise the bear. Most bears will avoid humans if they hear them coming. If one does see you, staying calm and making yourself look large (by slowly waving your arms or getting up on something) can deter it. Speak to it in a calm voice, letting it know you are not a threat (but nor are you prey). If all else fails, curling up into a ball and protecting your head can help optimize your chances of survival with a grizzly bear. With a black bear, fighting back with all your might could be what saves you!

On the other hand, if a moose is nearby, be stealthy so it does *not* detect you. If it does spot you, talk to it softly and very slowly move away. This technique may keep your nerves calm in this situation as well! Do not be aggressive because you do not want the moose to see you as a challenge. Recognize signs of agitation; if its ears are back, it may be more likely to charge. Taking cover behind something solid is key if this happens. Unlike situations with bears, it is okay to run from a moose if the situation escalates; however, like situations with bears, curling up into a ball and protecting your head is the go-to if you have been caught.

Mountain lions (also called cougars, pumas, panthers, and catamounts) can be especially frightening to encounter on a hike. Some of the most important advice is to remember not to run. Instead, do everything you can to not project yourself as prey, including making eye contact, standing tall, opening your jacket (if you have one), and speaking in a loud, firm voice. If a cougar initiates an attack, fight back! According to NPS, a hiker once used a rock to fend off a mountain lion attacking his child, and others have "fought back successfully with sticks, caps, jackets, garden tools, and their bare hands." Because mountain lions often try to bite the head or neck, staying on your feet and protecting your vital organs could save your life.

As you can see, knowing the nature of the animal can help you react best should you encounter one; however, preventative measures are always key. Whether you like to slow down and smell the roses or you are an adrenaline junkie, being prepared for whatever you encounter can make hiking much more enjoyable.

Distributed Electric Propulsion and What It Means for Safety



Example of distributed electric propulsion in an exhibit at the Defense Advanced Research Projects Agency's D60 Symposium. The Aurora XV-24 LightningStrike is an experimental unmanned aerial vehicle created by Aurora Flight Sciences and partners Rolls-Royce and Honeywell.

Photo by Daderot

BY MS. TIFFANY L. TOLBERT, STAFF WRITER

Distributed electric propulsion (DEP) systems are based on the idea that closely integrating an aircraft's propulsion system with its airframe and spacing multiple motors across the wing will increase efficiency, lower operating costs, and reduce carbon dioxide and other common greenhouse gas emissions.

More specifically, DEP systems use multiple electrically-driven propulsors—devices such as fans, propellors, or jets—spread about an aircraft's mechanical structure, distributing airflows and forces generated by the propulsion system in a manner that yields a net benefit in the total efficiency of the airplane. DEP systems utilize electrically-driven propulsors connected electrically to energy sources or power-generating devices. As a result, propulsors can be arranged, sized, and operated with greater flexibility to leverage improved performance over more traditional aircraft designs.

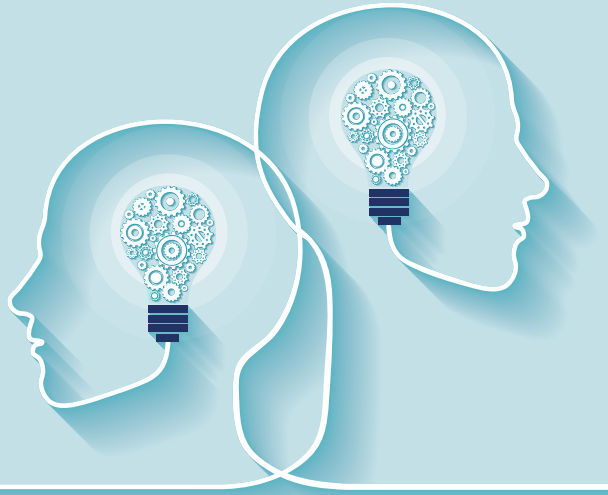
On a DEP system, the thrust-producing propulsors (e.g., jets and fans) do not share a mechanical power transmission system with the power-producing components of the system (e.g., engines). Instead, the power-producing components can be a combination of electrical power-producing and energy storage devices (e.g., an electric generator, fuel cell, battery, and capacitor), while the thrust-producing propulsors can be any combination of devices of various sizes and types. Due to the uncoupled association between the power-producing sources and propulsors, several innovative aircraft configurations are possible if highly efficient, compact electric machines and transmission systems are employed. The careful integration of electrically driven propulsors into unique, functional configurations on aircraft can result in many other potential benefits, including:

- Decreased aircraft fuel burn.
- Increased lift performance.
- Decreased community noise during takeoffs and landings.
- Increased vehicle control (reducing the requirements for traditional control surfaces).

While integration challenges still exist, DEP can lead to unprecedented improvements in future aircraft designs. In 2020, the U.S. Air Force Research Laboratory displayed a model of a Distributed Propulsion Concept Vehicle that uses gas turbines to produce power for arrays of electric fans. This experimental aircraft design, offering benefits in terms of added redundancy performance and fuel economy, could pave the way for a newer short takeoff-capable cargo aircraft.

But what does this all mean for safety?

A high-efficiency tactical cargo plane with a DEP system, for example, can have greater range and increased fuel efficiency over existing aircraft. This advantage could reduce the demand of transferring personnel and materials for airlift and other air operations, saving time—an important element in responding to emerging threats, providing combat support, and readiness. Moreover, a DEP-equipped cargo plan could prove valuable in future expeditionary and distributed operations, especially in areas where access to established airfields with robust infrastructure may be limited due to enemy strikes. Similarly, a DEP configuration that affords short-field performance could provide for operations in even more austere locations, and the reduction in acoustic noise that a DEP system can provide would be beneficial to reducing the vulnerability of the aircraft and, in turn, the threat to Airman safety.



Behavior-Based Safety: The Power of Care

BY MS. MICHELLE PIEHL, STAFF WRITER

According to the U.S. Bureau of Labor Statistics, 5,486 fatal work injuries, or 3.7 fatalities per 100,000 full-time equivalent workers, were reported in the United States in 2022, representing a 5.7 percent increase year over year. The *Air Force Times* reports seventy-five noncombat U.S. Air Force mishaps occurred in fiscal year 2023, representing an approximate 12 percent increase year over year.

Department of Defense Instruction (DoDI) 60577.07 defines a mishap as "An unplanned event or series of events that results in damage to DoD property; occupational illness to DoD personnel; injury to on- or off-duty DoD military personnel; injury to on-duty DoD civilian personnel; or damage to public or private property, or injury or illness to non-DoD personnel, caused by DoD activities."

Ensuring the safety and security of all U.S. Air Force and U.S. Space Force personnel and assets is of utmost importance for maintaining force readiness. "Our goal is to understand the associated hazards and to eliminate or mitigate them to the greatest extent possible in both training and combat operations," said Maj Gen Sean Choquette, U.S. Air Force Safety Chief, in an April 8, 2023, *Air Force Times* feature article.

Avoiding preventable workplace injuries, mishaps, accidents, or fatalities is essential to preserving Air Force operational efficiencies. Behavior-based safety (BBS) principles support intrinsic and extrinsic motivations to improve safety protocols, standards, and compliance. E. Scott Geller, Ph.D., describes this humanistic and behavioral approach as Actively Caring for People, or AC4P. Geller argues that by encouraging self-efficacy and accountability by recognizing achievement, behaviors are more likely to be replicated than with more traditional punitive-consequence avoidance techniques.

"Each occurrence of the desired behavior facilitates fluency and helps to cultivate a good habit," says Geller in "Behavior-Based Safety and Occupational Risk Management."

Empathy, empowerment, and engagement are key in risk management principles. By equipping workers with the skills and knowledge to understand the ripple effect of safety management, compassion and care for others become the central tenets of personal accountability.

Geller recommends that safety management begins with a focus on observable behaviors. Much like the principle of "if you see something, say something" regarding security protocols, this statement can be restated as "if you see something unsafe, care enough to say something to your colleague" regarding occupational hazards. Next, evaluate the intrinsic and extrinsic factors that may inadvertently promote risky behaviors. Consider the environment, culture, and support provided in a given situation to recommend and make improvements. Although Gellar promotes the concept of achievement-based analysis, he notes that consequences can make powerful motivators. He emphasizes that with a compassion mindset, picturing the consequence of an at-risk behavior may provide the necessary motivation to correct course. With this concept, using checklists, assessments, and other data collection activities may improve efficacy by providing more of a scientific method-styled approach to evaluating achievement-based goals. Evaluating outcomes with a curiosity mindset rather than judgment promotes active listening and learning opportunities. Lastly, he recommends that all interventions emphasize empowerment, choice, trust-building, and community.

BBS and other occupational safety programs work effectively when the culture promotes confidence, communication, collaboration, and community. This safety-minded culture is achieved and maintained through continuous correct practice with open and honest communication to build confidence, enhance collaborative work, and develop community through a culture of care.

"We are all in this together," Geller says in his 2013 TEDx talk on the psychology of self-motivation. "We need each other."

The Art of the Reflex:
Training, Resilience, and Survival

BY MS. TIFFANY L. TOLBERT, STAFF WRITER

A human reflex is defined as an automatic response to stimulus that does not require conscious thought. A superhuman reflex can be referred to as an automatic reaction to danger with great speed or heightened abilities. Superhuman reflexes encompass enhanced reactions, enhanced reaction times, and enhanced preparedness. All of these are characteristic of Airmen. When Airmen are involved in or witness an emergency (e.g., hearing an explosion or watching a life-threatening situation unfold), their human and superhuman reflexes kick in. They start running toward the scene, rather than away, displaying courage, and executing solutions.

The fight-or-flight response, a type of human reflex in reaction to emergencies or stressful or frightening situations, allows individuals, like trained Airmen, to act before thinking. The fight-or-flight response can happen in the face of imminent physical danger (e.g., scenarios involving sniper fire, small arms fire, enemy combatants, and chemical warfare) or as a result of a more psychological threat (e.g., a domestic issue that places every Air Force base in a vulnerable position).

The fight-or-flight response triggers a cascade of stress hormones that produce well-orchestrated physiological changes, which in turn prepare the body to either fight or flee from danger. The sympathetic nervous system is responsible for the fight-or-flight response. When stimulated, adrenal glands (small triangular-shaped glands on top of both kidneys) trigger the release of catecholamines (hormones like dopamine, norepinephrine, and epinephrine). The release of catecholamines results in such feedback as an increased heart rate and breathing rate, which provides the energy and oxygen the body needs to fuel a rapid response; dilated pupils, which allow more light into the eyes, creating a better vision of surroundings; pale or flushed skin, which signifies that blood flow to the surface areas of the body is reduced, and flow to the muscles, brain, legs, and arms are increased for strength; and trembling, which tenses and primes the muscles for action. And this is where training comes in.

By preparing the body for action, both mentally and physically (e.g., completing deployment exercises to test and prepare for deployment readiness), Airmen are better equipped to perform under pressure, develop and retain various tactics and techniques for survival, and overcome a plethora of challenges.

By preparing the body for action, both mentally and physically (e.g., completing deployment exercises to test and prepare for deployment readiness), Airmen are better equipped to perform under pressure, develop and retain various tactics and techniques for survival, and overcome a plethora of challenges. With such training, the stress created by an emergency or stressful situation can be favorable, making it more likely for an Airman to cope with the threat and perform well under pressure.

Along with the reaction of reflexes and training, an Airman's resilience—the ability to withstand, recover, and grow in the face of stressors and changing demands—can help Airmen deal with and come out of stressful situations. Resilient individuals exhibit commitment to a task and see it through, focus on the things they can control instead of things out of their control, and view stress as just another challenge to overcome. This viewpoint helps keep Airmen focused, mission-ready, and primed for survival.

How to Train Yourself to Stop Overtraining

BY MR. JOSEPH FONTANAZZA, STAFF WRITER

Anyone who has taken an athletic endeavor seriously craves the satisfaction that comes from pushing past your predetermined physical limits and progressing further in your abilities. The feeling is the force that keeps a person's hand from hitting the snooze button on their phone alarm for a 4 a.m. run or motivates them to hit the gym for a late-night workout after a stressful day at work. A good obsession with progression is the thing that makes a personal record (a "PR") on the "big three" weightlifting exercises (bench press, squat, deadlift) such a sacred text for committed powerlifters. Dedicated runners hold a similar reverence for their fastest mile or longest distance traveled on foot.

American athletic culture correctly venerates those who put in the extra hours to become great. Kobe Bryant is respected not only as a global sports legend for his on-court accomplishments but also his otherworldly work ethic. Bryant's training routine was known to be grueling even by his National Basketball Association contemporaries' standards. Multiple teammates from the 2008 United States men's Olympic basketball team, nicknamed the "Redeem Team," are quoted as saying that Bryant's practice habits and mentality rubbed off on them and made them all better players in the long run. Can the "Mamba Mentality" type of work ethic and commitment to a craft possibly be detrimental at times, though?

The men and women of the United States Air Force (USAF) may not have to run a four point three-second forty-yard dash or hurdle a forty-inch vertical, but relatively few humans can withstand the gravitational force of flying an F-16 Fighting Falcon without passing out. Active USAF members must be in the top percentiles for physical fitness to withstand the rigors of serving their country and must pass the Air Force Physical Fitness Test. The dedication it takes to be in the USAF is something to be celebrated; however, it can also lead an Airman to overtrain, like any professional athlete.

The term *overtraining* would sound ridiculous in the days of "Run until you puke" and "Water is a sign of weakness," but the sports world has again shown trends that spill over into regular life. A 2007 article written by Nuno Matos and Richard J. Winsley for the *Journal of Sports Medicine* about the trainability of young athletes and overtraining found that "varying rates of overtraining syndrome have been reported, even up to thirty percent among young athletes." Matos and Winsley's findings were recently

Yoga poses, no matter how hard they look when you are a beginner, are great for stretching your muscles, and Pilates is a workout on its own.

republished in a 2023 article titled, "Overtraining Syndrome as a Risk Factor for Bone Stress Injuries among Paralympic Athletes."[1]

Many U.S. Armed Forces members have a background in amateur athletics, and the inherent work ethic it takes to serve your country puts you at a greater risk of overtraining, so below are five tips that can help keep you pushing past your limits without limiting your body with constant muscle fatigue.

Stretch: Stretching before and after workouts is a suggestion for Airmen younger than age twenty-seven because it helps you prepare for and recover from physical activity; however, it is a requirement for any man or woman pushing thirty if you would like the ability to get out of bed the next day after a hard training session. Yoga poses, no matter how hard they look when you are a beginner, are great for stretching your muscles, and Pilates is a workout on its own.

Take it easy on the caffeine: Coffee is a requirement to function for many people, and that is completely fine in moderation; however, sugary energy drinks and pre-workout supplements are dangerous, especially for people with higher blood pressure and heart rates. Energy drinks that are high in sugar cause spikes in vitality that can make you feel like a superhuman during your first reps but completely lethargic during your workout's midpoint, making you want to crack open another 100 milligrams of caffeine in a can. Pre-workout powder mixed in a drink can cause anxiety, increased heart rate, dehydration, and increased risk of muscle cramps and has led to hospitalizations and even deaths resulting from ingesting too much of the powder as people search for the boost they need to get through a hard training session.

Switch it up: You probably already know to focus on different muscle groups on different days. We all know through one hundred percent unscientific, non-peer-reviewed research that chest/arms day is the best day of the week whereas leg day is the worst, but changing your routine can make the difference between looking forward to your gym session and dreading it. Mixed martial arts (MMA) has exploded in popularity over the past twenty years, and you will likely be able to find a gym for each of the most common disciplines, such as Brazilian jiu-jitsu, Muay Thai, kickboxing, and boxing if you live in a moderately populated area. Martial arts are a great way to make cardio interesting while learning a skill and engaging smaller muscle groups. Although MMA carries its own injury risk, hitting a punching bag or grappling with proper equipment and direction is a great way to stay active if a problem such as joint pain is hindering your ability to progress with powerlifting. Playing your favorite team sport is also a fantastic workout. Running up and down a basketball court is just as good cardio as jogging around a track and is certainly more engaging.

Do not compare yourself with fitness influencers: Fitness influencing on social media sites such as Instagram, Facebook, YouTube, and TikTok is a huge business that requires a substantial time investment and a lot of gym mirror pictures. Some fitness influencers can be useful resources from which to learn, but remember that you have a career with the USAF, whereas their job is working out. Almost every aspect of a popular fitness influencer's life is to make sure they look muscular or attractive on camera. They get free supplements from sponsors and free clothes or equipment from brand deals. This is not a call for jealousy but a reminder that you should not feel insecure that a person who works out for a living has six-pack abs and you currently do not. You will get there.

Rest: Do not punish yourself because your body does not feel up to another grueling training session. Sometimes your body is trying to tell you something. Almost every informed or scientific source for workout tips will tell you that rest days are essential for muscle growth and recovery, and this one is no different.

[1] Madzar, Tomislav, Tonci Masina, Roko Zaja, Snjezana Kastelan, Jasna Pucarin Cvetkovic, Hana Brborovic, Matija Dvorski, Boris Kirin, Andreja Vukasovic Barisic, Ivan Cehok, and Milan Milosevic. 2023. "Overtraining Syndrome as a Risk Factor for Bone Stress Injuries among Paralympic Athletes," *Medicina* 60 (1): 52. 1

Beyond Artifacts: Stories of Service from Colony Glacier

BY MRS. LAUREN FOSNOT, STAFF WRITER

Storytelling is an intrinsic part of the human experience. Before written language was created, stories were transmitted visually and orally. This custom has served mankind well as innovations have been born from accumulating knowledge from stories across generations. For example, Elias Disney, who worked as a carpenter at Chicago's World's Columbian Exposition, better known as the Chicago World's Fair, shared stories with his son, Walt, which later inspired him to create the famous Disney amusement parks.

Many Mobility Airmen can attest to the importance of storytelling, having learned a great deal from their leaders' personal recounting of mistakes and accomplishments. At the heart of this tradition is the Air Mobility Command (AMC) Museum, situated at Dover Air Force Base (AFB), Delaware. The museum offers compelling narratives of the men and women who contributed to the evolution of Air Mobility in the U.S. Air Force (USAF). Countless stories are told every day within the museum—from the comprehensive exhibits to individual artifacts.

A current display at the AMC Museum garnering attention is the Air Force Mortuary Affairs Operations (AFMAO) exhibit, which serves a twofold purpose: 1) educate visitors about the role and history of AFMAO, exemplified by its recent recovery mission, Operation Colony Glacier, and 2) commemorate the fifty-two service members whose lives were claimed in a tragic accident in 1952.

ABOUT AFMAO

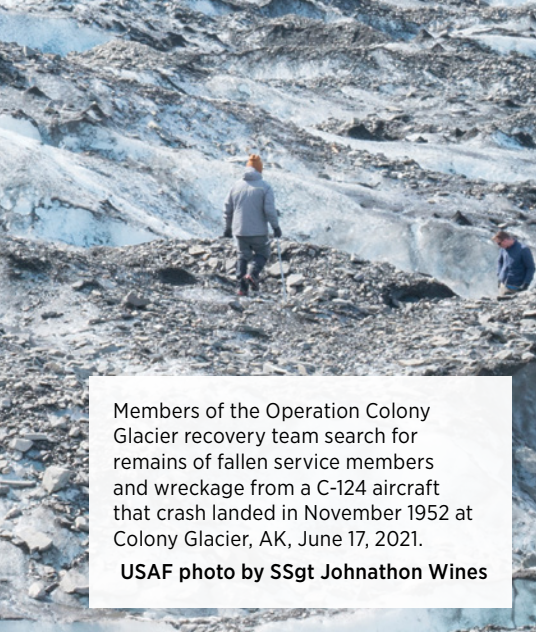
Also located at Dover AFB, AFMAO oversees the dignified transfer of the remains of those who have fallen while in service to the nation, providing support to grieving families during their most challenging moments. The organization maintains a highly trained and resilient Total Force team of professionals capable of fulfilling the United States' sacred commitment of ensuring Dignity, Honor, and Respect to those who made the ultimate sacrifice while in service for the nation. AFMAO recently partnered with the AMC Museum to tell the story of the Colony Glacier Mission, which AMC Museum Deputy Director Eric Czerwinski emphasizes is a solemn but important undertaking.

COLONY GLACIER: NO SERVICE MEMBER LEFT BEHIND

On the fateful day of November 22, 1952, a USAF C-124 Globemaster II aircraft carrying forty-two Airmen, eight Army Soldiers, one Marine Corps Major, and one Navy Commander crashed into the icy, 9,629-foot Mount Gannett in Alaska, roughly fifty miles east of Anchorage. Weather conditions at the time prevented an immediate recovery, and later, the aircraft could not be found—that is, until June 10, 2012. On that cold summer day, Soldiers assigned to the Alaska Army National Guard spotted debris from the vantage point of a Blackhawk helicopter during a routine training exercise. They were nearly fourteen miles from where the Globemaster crashed six decades prior.

FAST FACTS ABOUT THE AMC MUSEUM

- It was established in 1986.
- The museum sees an average of 120,000 to 130,000 visitors annually.
- It is the only museum in the world with the enormous C-5 Galaxy.
- Every day, the museum has four or five planes open, and even has an "open cockpit Saturday" feature for the public to enjoy.
- The museum has an air traffic control tower visitors can access.
- The museum is home to thirteen "First, Last, and Only" aircraft in the world.



Members of the Operation Colony Glacier recovery team search for remains of fallen service members and wreckage from a C-124 aircraft that crash landed in November 1952 at Colony Glacier, AK, June 17, 2021.

USAF photo by SSgt Johnathon Wines

Displayed here are remnants of C-124A Globemaster II and unidentifiable personal effects that belonged to some of the fifty-two service members who were onboard when it crashed into Mount Gannett, a peak within the Chugach Mountains in eastern Alaska. The Air Force Mortuary Affairs Operations (AFMAO) exhibit was unveiled at the Air Mobility Command Museum, Dover Air Force Base, DE, Sept. 5, 2023. The exhibit covers the history and mission of AFMAO and Colony Glacier.

USAF photo by Jason Minto

Since this discovery, many service members have dedicated tremendous time and effort to find the remains of the crash victims, identify them, and bring them home. The weather still poses a significant challenge, but all service members involved are committed to not leaving any service members behind. In addition to searching for possible remains, the service members also search for flight equipment and personal effects, which are a person's personal property, usually items of particular significance that are carried or worn. As of June 2022, a decade after the debris was first spotted, forty-four of the fifty-two service members have been recovered and identified. The Colony Glacier exhibit at the AMC Museum serves to honor the fifty-two service members, offer some closure to their loved ones, and remind Airmen about their dedication to one another and to the nation.

AFMAO COLONY GLACIER EXHIBIT

The AMC Museum and AFMAO welcome visitors to Dover AFB to learn about and connect with the stories of the fifty-two service members who were lost. By displaying their personal effects, the exhibit brings a tangible reality to their narratives. Everyday items like hats and shoes serve as powerful reminders that the individuals lost were real Airmen, not just numbers in a history book, who met their end tragically while bravely serving their country. "That's what we do at the AMC Museum—remember those who served before us," Czerwinski said.

SAFETY IMPLICATIONS

With his firm grasp of AMC history, Czerwinski noted that the 1952 crash was not an isolated incident. A Fairchild C-119 Flying Boxcar crash also occurred in Alaska less than a month before the Globemaster crash. Both deadly crashes involved the aircraft being off course.

When asked what today's Mobility Airmen can learn, in terms of safety, from these tragedies, Czerwinski replied, "I think it comes down to ensuring your flight planning is solid. I was not in the mind of the navigator that fateful day to know what errors added up, but I can tell you it is important not to take any details for granted. Double check what you've calculated and double check what you're doing instead of assuming it is accurate."

AMC MUSEUM

While touring the museum, visitors can explore thirty-six aircraft on display and over 4,000 artifacts, providing an immersive journey through the evolution of airlift and air refueling. The museum, which is manned by a dedicated staff and a team of more than eighty volunteers, showcases the historical significance of the USAF's mobility capabilities.

While capturing the past, the museum also focuses on the future, expanding its endeavors. In recent years, the museum acquired two new aircraft, a C-46 "Commando" World War II aircraft, and a KC-10A "Extender" tanker. Additionally, in 2024, the museum's exhibit rooms are undergoing remodeling and modernization using diversity and inclusiveness funds. The renovations, according to Czerwinski, will feature thoughtful, chronologically ordered displays that highlight the strength of an inclusive USAF. Ultimately, the museum wants to add a second hanger, a three-hundred-seat theater conference center, and eight classrooms to support the museum's many events and programs, like summer camp.

In the meantime, the AMC Museum continues to shed light on the legacies of Mobility Airmen. In partnership with AFMAO, the Colony Glacier exhibit is a tribute to the lost souls of the 1952 crash, reminding visitors of their sacrifices. The exhibit serves as a powerful reminder that behind every artifact and name, there is a story of a life dedicated to serving the nation.

Small Changes, Big Protection: Enhancing Fire Safety in Your Home

BY MS. SOFIA SCHATZ, STAFF WRITER

Although it is a familiar and often routine activity, between 2017 and 2021, cooking caused forty-four percent of all reported home fires in the United States. Other leading causes of home fires are candles, electrical systems/lighting equipment, heating equipment, Christmas trees, and smoking. House fires can also be intentionally or unintentionally started. Intentionally set fires include arson; unintentionally set fires usually start from unexpected sources. A fire can start from items you may not even think about, such as furnaces, an abundance of lint in clothes dryer filters, and plugged-in appliances.

At any rate, it is important to be aware of how quickly an uncontrollable fire can spread. For perspective, after a small flame begins it can transform into a full-fledged fire in less than thirty seconds. When a house fire forms, the heat can rise to over 1,100 degrees Fahrenheit in about three and a half minutes, causing rapid and extensive damage. The flames of a fire and the heat it gives off pose threats to the safety of people and property, but the smoke and gas released are the primary causes of house fire deaths. People often die from a lack of oxygen rather than the flames themselves.

Each year, house fires cause about four thousand American deaths and more than two thousand severe injuries. But many of these deaths and injuries, as well as the fires themselves, are preventable. Fortunately, you can use many tips and strategies to decrease the possibility of unintentionally setting a house fire.

The bottom line: no risk is too small to prepare for. The consequences of not taking the proper precautions can be significant—just like a destructive, life-threatening fire can result from a small spark.

UNPLUG UNUSED APPLIANCES

Many people may not know that leaving unused appliances plugged in increases the risk of fires. Hence, it is not a common practice for many to unplug various appliances upon leaving their home for long periods of time. While it may seem like wires and outlets are generally built to be safe, consider taking extra precautions. Appliances that generate heat, such as hair styling tools and toasters, are the most important to unplug.

REMOVE LINT AND REPLACE FILTERS

Lint is the leading cause of dryer fires, and dryer fires frequently play a role in causing house fires. For instance, if lint continuously builds up in the filter of your dryer, the chances of your home catching fire increase. Therefore, following each use it is essential to remove the lint and periodically check for and clear any build-up in the outdoor dryer vent.

PUT OUT CIGARETTES AND CIGARS PROPERLY

If you are a smoker it is important to dispose of your cigarette, cigar, or other smoking devices properly. Smoking is a leading cause of house fires because many people do not: 1) extinguish smoking materials fully or 2) dispose of them correctly, placing them where a fire could easily start. Make sure not to place smoking materials in a flammable area, and when you are finished smoking, be sure they are completely smothered. Additionally, do not let cigarette butts pile up as the materials are combustible and may smolder for several hours before causing a fire.

MAKE SPACE AROUND FLAMMABLE ITEMS

All heaters should have plenty of space on all sides, which means no other objects should be in proximity to the heat dispersed. Many objects are more flammable than you think. It is important to remember to make sure personal belongings are at least three feet away from a heat source.

INSTALL AND MAINTAIN SMOKE DETECTORS

Having smoke detectors increases your chances of survival if a residential fire should occur. Fire alarms should be installed on every level of the home, including basements. Updating the batteries is crucial, as dead batteries render smoke detectors useless. It is generally recommended to change the batteries twice a year; however, for specific operating instructions, refer to your alarm's manufacturing information. Moreover, for the visually impaired, there are audible alarms that warn residents of a fire. Alarms use flashing lights or vibrating pads as warning signals for the hearing impaired.

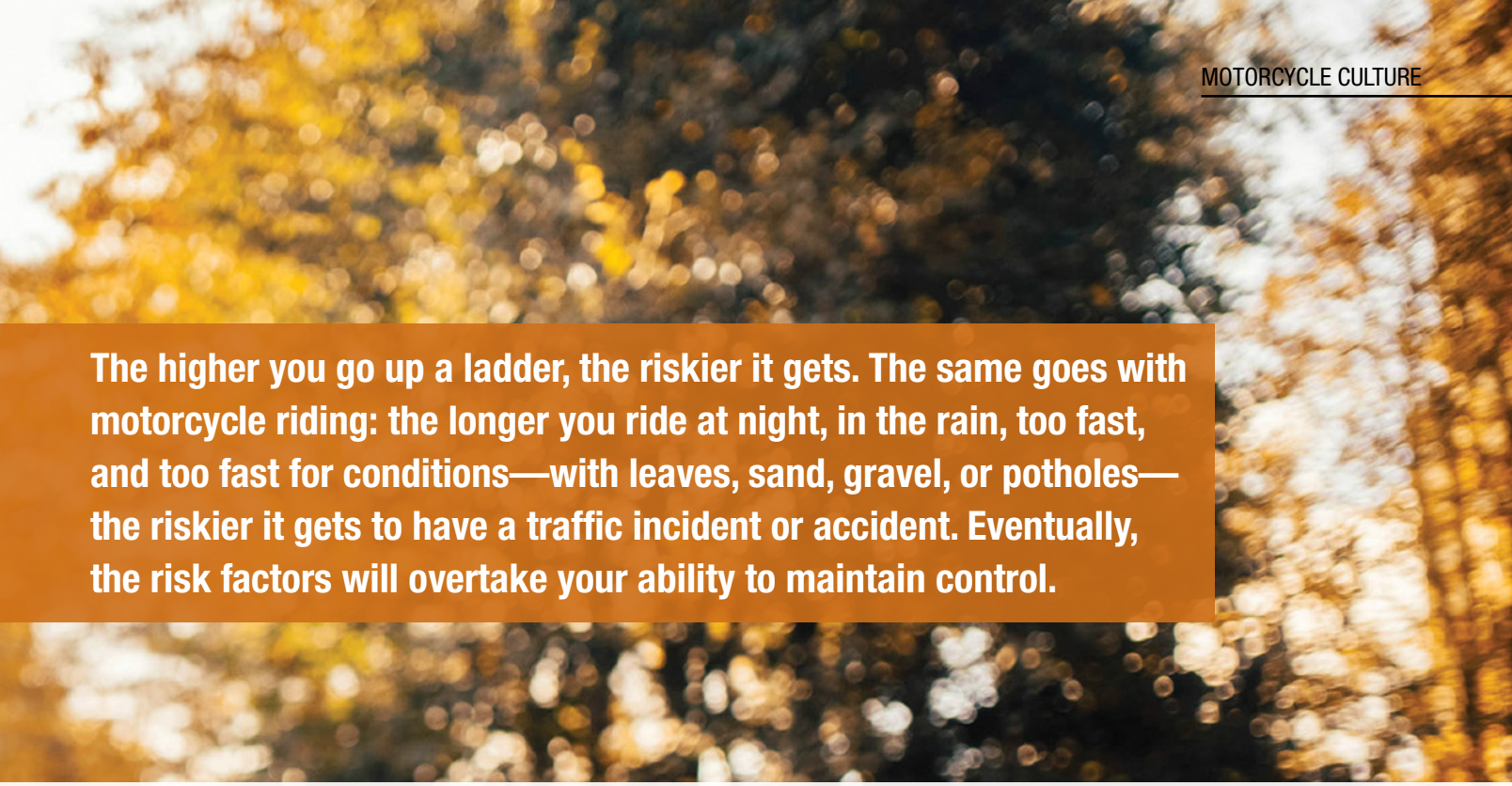
INVEST IN AFFORDABLE FIRE SAFETY EQUIPMENT

Fire extinguishers placed strategically in key areas can quickly contain small fires before they escalate. Fire suppression blankets are particularly useful for stove-top fires, providing an easy and effective way to smother flames. Also, emergency escape ladders for upstairs bedrooms offer a critical means of egress in case of a fire, ensuring the safety of all occupants. These items are not only effective but also available at low cost.

The bottom line: no risk is too small to prepare for. The consequences of not taking the proper precautions can be significant—just like a destructive, life-threatening fire can result from a small spark. It is essential to increase your awareness of risks and take the ones you are aware of more seriously. Minor adjustments could save your home and prized possessions—and your life.

Motorcycle Riding Does Not Have to Stop in the Cold Seasons—If You Anticipate the Risks

BY MR. BRAD FOSNOT AND MRS. KAREN FOSNOT, STAFF WRITERS



The higher you go up a ladder, the riskier it gets. The same goes with motorcycle riding: the longer you ride at night, in the rain, too fast, and too fast for conditions—with leaves, sand, gravel, or potholes—the riskier it gets to have a traffic incident or accident. Eventually, the risk factors will overtake your ability to maintain control.

In the fall and winter seasons, we know—as avid riders—that there are a few different things to consider, unlike in the spring and summer when traveling safely on roadways. For instance, as temperatures drop, the rubber compounds of motorcycle tires lose some of their traction (or "stickiness") and cannot adhere to road surfaces as well as they do in warmer climates. Hence, in anticipation of how tires can react to coldness, riders should reduce their speed while cornering and allow for more stopping distance.

Moreover, fewer motorcycles appear on the road during the fall and winter. As a result, car drivers may develop an "out of sight, out of mind" mentality, making it even more important for riders to be seen. Choosing the right motorcycle gear—as in type and color—can help. For example, donning clothes that are brightly colored (i.e., white, yellow, orange, or fluorescent) and made with reflective materials (i.e., a motorcycle vest) is effective. Gear that looks more like Darth Vader than a rider does not help. We do not know if loud pipes save lives, but brighter colors just might.

One personal experience that convinced me (Brad) of the importance of making sure we are seen while riding happened while I was at a red light behind another car. I recognized the sound of sliding tires as a car that had not seen me soon enough rear-ended me, pushing my motorcycle into the vehicle in front of me. Fortunately, I was not hurt, but my motorcycle was not as lucky. When I asked the driver of the car what had happened, he replied, "I just didn't see you in time…" My choice of a darker clothing color and sand on the road played two big parts in the accident.

Another factor in fall and winter motorcycle accidents is sand and gravel on the roads, making cornering and quick stopping more difficult. Some areas have an abundance of leaves on the road, which adds yet another challenge. Leaves, especially wet leaves, can be just as slippery as ice, and reducing your speed can make all the difference between staying upright and going down.

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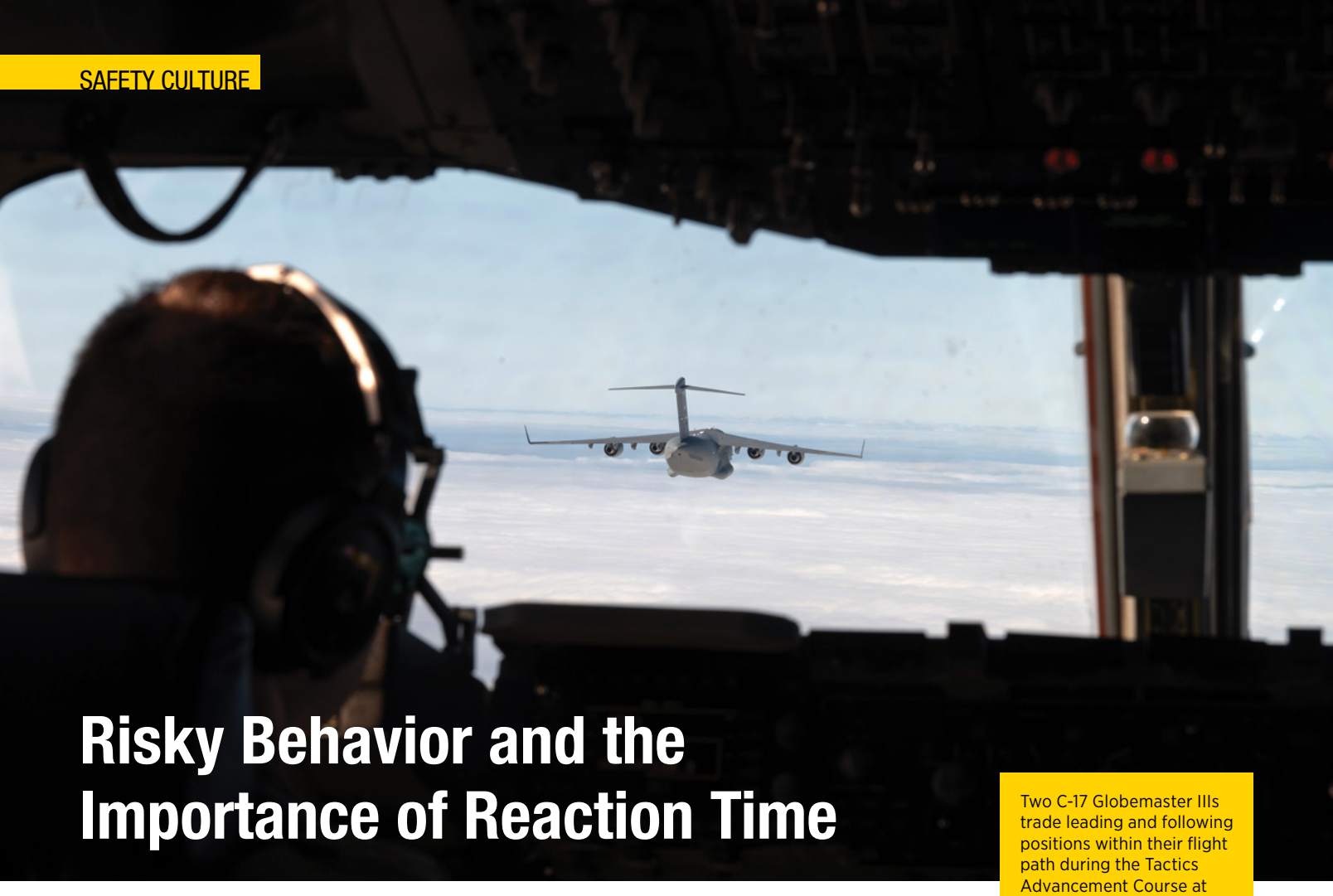
I (Brad) was a motorcycle safety instructor for five years. As part of every new class, I would ask all the students if they knew someone who had been involved in a motorcycle accident. Nearly everyone would raise their hand with a story about an accident. The follow-up question we asked was, "Could the accident have been prevented?" The answer was "yes" about 90 percent of the time; it could have been prevented through proper training and risk management.

The definition of *safe* is to be without risk. When boarding a motorcycle, riders assume risk upfront. Riders willingly accept the inherent vulnerability that comes with it in exchange for the thrill and freedom of riding. Managing risk is the key to being a safe and successful motorcycle rider for years to come.



Risky Behavior and the Importance of Reaction Time

Two C-17 Globemaster IIIs trade leading and following positions within their flight path during the Tactics Advancement Course at Joint Base McGuire-Dix-Lakehurst, NJ, Feb. 7, 2024.

USAF photo by A1C Aidan Thompson

BY MS. DARA MARLAR, STAFF WRITER

Over the past five years, a substantial increase in dangerous actions in contested territories has occurred, translating to increased risk to Airmen's safety. These hazardous behaviors, released via a collection of declassified images and videos by the Department of Defense, include the following:

- Air intercepts and other close approaches to U.S. aircraft.
- The brandishing of weapons.
- Reckless maneuvers.
- The discharging of chaff.
- The firing of flares and other objects and projectiles.
- Cutting in front of U.S. aircraft causing it to fly into wake turbulence.

Many of these actions require quick reactions from Airmen, for such actions can potentially produce miscalculations in judgement, which can lead to unsafe incidents. With the alarming increase in risky behavior by Chinese aircraft, a split-second decision could be the difference between life and death.

Not only can the reaction of an Airman cause immediate danger to themselves, but the possibility of long-term results, including international warfare. The ability of an Airman to identify an oncoming threat, determine the possible outcomes of their actions, and react accordingly needs to be second nature.

The U.S. Air Force implements many training courses based on situational awareness to ensure positive reactions and reaction times. These are training scenarios that require an Airman to not only identify threats but to accurately portray why they were threats. These courses are effective because they allow an Airman to learn from past mistakes, and the lessons allow for scenarios to be tailored to a specific training need.

Studies have shown that situational awareness training makes reaction times and threat identification times faster. These results allow an Airman to make an informed split decision, which will help keep themselves and those around them safer.

Focus On Flight Safety!

**BY LT COL JASON KNAB, CHIEF,
AIR MOBILITY COMMAND FLIGHT SAFETY DIVISION**

At the Air Mobility Command (AMC) Flight Safety Division, we are committed to maximizing capacities while minimizing risks. We work tirelessly every day to collect data, trends, and feedback to identify possible hazards, risks, and errors using proactive safety programs. In addition, we maintain constant communication with the Wing Chiefs of Safety through monthly crosstalk, Teams threads, and digital correspondence.

As we approach the end of 2024 and move into 2025, the Flight Safety Division remains energized to curb mishaps by focusing on specific areas of flight safety. These focus areas are aircraft agnostic and not attributed to any base or flying community.

Our exceptional proactive safety programs drive these AMC Safety Focus areas. We will emphasize multiple areas of interest to curb mishaps and protect our aircrews while they push the limits and remain a superior mobility fighting force.

Although not exhaustive, the following areas shall be AMC Safety Focus areas:

- Bolstering proactive safety program awareness.
- Fostering a Just Culture in squadrons.
- Promoting fatigue awareness.
- Advocating maximum endurance operations risk management.
- Ensuring aircrew proficiency and recency.
- Assessing experience levels and readiness.
- Implementing an improved operational risk management.
- Promoting stabilized approaches and landings.
- Mitigating jet blast on the ground.
- Minimizing hot brakes incidents.
- Enhancing aerial port operations.
- Promoting proficient and standard air traffic control and ground communications.
- Ensuring stable receivers during air refueling.
- Refining boom operator procedures and techniques.

By focusing on these areas of interest, we are excited to continue using proactive safety measures to curb mishaps while acting and communicating our priorities to aircrews at our flying wings. LET'S GO!

A C-17 Globemaster III prepares to land during the 2024 First State Airshow at Dover Air Force Base, DE, May 19, 2024.

USAF photo by Roland Balik

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A DAY IN THE LIFE

Aircrew members assigned to the 6th Airlift Squadron run to a C-17 Globemaster III while conducting Flush checklist procedures on Yokota Air Base, Japan, in support of Valiant Shield 2024, June 14, 2024. The Flush checklist is designed for an aircrew to get an aircraft's engines running in minimal amount of time and ready for departure predicated on an imminent threat. Exercises such as Valiant Shield allow the Indo-Pacific Command Joint Forces the opportunity to integrate forces from all branches of service and with our allies to conduct precise, lethal, and overwhelming multi-axis, multi-domain effects that demonstrate the strength and versatility of the Joint Force and our commitment to a free and open Indo-Pacific.

USAF photo by SrA Keegan Putman