E ADOBILITY FORUM THE MAGAZINE OF AIR MOBILITY COMMAND | SUMMER 2025

Motorcycle Culture—Fun and Safety on Two Wheels

Mental Health and Performance in Aviation

Col John B. Kelley on Safely Integrating Risk and Readiness

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On the Cover

A motorist rides his motorcycle during the Motorcycle Safety event at Dover Air Force Base, DE, April 18, 2024.

USAF photo by Amn Liberty Matthews

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FROM THE TOP

Col John B. Kelley on Safely Integrating Risk and Readiness

BY MS. LAUREN FOSNOT, STAFF WRITER

s the U.S. Air Force transforms to meet the demands of the Great Power Competition, risk management is taking on a new level of importance. With complex and dynamic threats, Airmen must be equipped to make risk-informed decisions at every level. Through the Integrating Risk and Readiness campaign, leaders are enhancing readiness across the full scope of training, exercises, and combat operations.

Col John B. Kelley, Director of Safety for Air Mobility Command, shares his insight about how and why risk management needs to be ingrained in every Airman.

COMMUNICATION IS KEY

Kelley stressed that effective risk management starts with communication from leadership down to every level of the organization about what risk management actually is. He emphasized that risk management is about understanding the risks Airmen face and knowing there are mitigations to reduce those risks.

"We have an inherently risky operation, and so the communication from commanders to their people needs to stress that zero risk is usually impossible," he explained. "It's about identifying risk, recognizing opportunities, and mitigating risks appropriately."

He hopes to empower Airmen to communicate with leadership and among their team about risks they observe. "If an Airman can go to their leadership and say, 'This [operation] is more risky than it needs to be' or 'This equipment is a hazard,' and leadership listens and acts, that's a good sign."

He also noted the importance of commanders communicating with Airmen about the missions at hand. "It's not just about their job—it's about the overall mission. When Airmen understand the broader objective, they make better risk-based decisions that keep people safe and move the mission forward."

A MENTAL TOOLBOX

Kelley explained that effective risk management is not about memorizing processes—it is about critical thinking.

Airmen are trained to assess risk using models like the SWOT (strength, weaknesses, opportunities, and threats) analysis or the 5M framework (mission, media, machine, management, and manpower). All these models teach a disciplined way to think about risk. "Whatever model you use," Kelley said, "it's about having a systematic way to think through what you need to do,



Col John B. Kelley, Air Mobility Command Director of Safety

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Good judgment comes from experience, and experience comes from exercising judgment in real situations.







WEAKNESSES

what risks are involved, and what mitigations you can apply to be safer and more effective."

These critical thinking skills form habitual patterns of thought, which ultimately lower the risk of an operation.

Supervisors play a crucial role in fostering this mindset. "They have to be receptive to their Airmen's critical thinking," he said. "And beyond that, they need to create 'sandboxes'training and exercise opportunities where Airmen can practice these skills in a safe, controlled environment and learn from experiences."

Kelley believes that developing good judgment comes from experience. "Good judgment comes from experience, and experience comes from exercising judgment in real situations," he said.

DISTRACTIONS AND THEIR IMPACT ON SAFETY

When asked about distractions that affect risk management, Kelley did not hesitate. "The biggest distraction-both for Airmen and for me-is this," he said, holding up his phone.

"The world is too much with us," he said, quoting poet William Wordsworth. "There's never been a more apt phrase for right now because the world invades our time to focus and our time to relax. It's very difficult to pull away from that."

Distractions, especially from phones, impact safety in many ways. "We



OPPORTUNITIES

THREATS

see a continuous trend of distracted driving," Kelley said. "All it takes is a moment of inattentiveness for something to go wrong."

Phones can also be a crutch. "If an Airman can always call their supervisor for guidance, they might not build the decision-making skills they need," he said. "Yes, they should seek help when needed, but they should also be confident in their ability to assess and respond to risk on their own."

THE FUTURE FIGHT AND RISK

Kelley emphasized how risk management plays a central role in Agile Combat Employment (ACE).

"ACE is a set of warfighting techniques designed for large theaters like the Indo-Pacific," he explained. "Small teams of Airmen create outsized combat effects by being mobileoperating, communicating, and relocating quickly. This [technique] makes it harder for adversaries to target them."

However, ACE requires decentralized leadership. "Instead of a base with one thousand people and multiple leadership layers, you have a slim team with just the people needed to execute the mission," he said. "That means decision-making happens at much lower levels—sometimes a captain or a tech sergeant makes the call on whether to continue or relocate."

This type of mission is why ingraining risk management skills in Airmen is crucial. "In ACE, you may not be able to reach the commander," Kelley said. "You have to make riskinformed decisions on your own, and those decisions will determine mission success."

Kelley is continuously impressed by Airmen taking the initiative to enhance safety. At Joint Base Pearl Harbor-Hickam, HI, cargo handlers identified a recurring hand injury hazard when securing equipment. Instead of waiting for a directive, they designed a simple but ingenious solution-adding extended handles to eliminate the pinch risk.

"That innovation spread by word of mouth," he said. "By the time I visited a unit in Europe, they had already adopted it. That's risk management in action."

Although Kelley emphasizes proactive risk mitigation, he also stresses the importance of learning from the past, as many job guides and procedures are built on generations of hard-earned lessons. He knows new risks will always arise, but by staying active in risk management and refining established procedures, we can eliminate unnecessary risks while strengthening operational safety.

"These [technical orders and Department of the Air Force Instructions] aren't arbitrary-they're built on decades of experience," he said. "They've been refined by Airmen who figured out what works and what doesn't."

With leaders like Kelley shaping AMC's safety culture, the next generation of Mobility Airmen is developing the judgment and skills necessary to navigate the challenges of modern warfare while keeping themselves and their teams safe.

"When risk management is second nature, we're a stronger, more lethal force," Kelley stated.

AMC Welcomes Dedicated Leader in Air Force Safety

BY MS. LAUREN FOSNOT, STAFF WRITER

ecently, CMSgt Michael A. Evans became the Senior Enlisted Leader of the Safety Directorate and Major Command Functional Manager for the Safety Career Field at the Air Mobility Command Headquarters, Scott Air Force Base (AFB), IL. In this role, Evans serves as the principal advisor to the Director of Safety, guiding on all matters related to risk management, mishap prevention, and force readiness. He oversees the interpretation and implementation of safety directives and programs, ensuring their alignment with Air Force policies and operational objectives. In addition, he assesses readiness and mission capability across the command, identifies critical staffing requirements, and advocates for Air Expeditionary Force and command-level resourcing needs.

Evans entered the Air Force in January 2001, completing the Security Forces training in May of that year. He held a variety of positions before transitioning into Occupational Safety in 2007. Prior to his current position, he served as the Senior Enlisted Leader of the Command Occupational Safety Division at the U.S. Air Forces in Europe – Air Forces Africa Safety Directorate, headquartered at Ramstein Air Base, Germany.

Evans has been heavily involved in shaping Air Force safety education and

standards in the Safety Career Field, contributing to training improvements that enhance operational safety across the command. He helped develop the Weighted Airman Promotion System's Specialty Knowledge Test and the Pre-Craftsman Safety Course. He applied his expertise in risk management to safeguard personnel and assets in dynamic operational environments during deployments in support of OPERATION IRAQI FREEDOM and OPERATION ENDURING FREEDOM.

Evans' career also spans numerous assignments across various Air Force installations, including Seymour Johnson AFB, NC; Incirlik Air Base, Turkey; Los Angeles AFB, CA; Andersen AFB, Guam; Joint Base San Antonio, TX; Joint Base Langley-Eustis, VA; and Osan Air Base, Republic of Korea.

He has served in various safetyrelated roles, including Safety Technician, Ground Safety Manager, Occupational Safety Manager, Wing Safety Superintendent, and Senior Enlisted Leader of the Occupational Safety Division.

Throughout his career, Evans has received numerous awards and service and expeditionary medals, including the Meritorious Service Medal with three oak leaf clusters, the Air and Space Force Commendation Medal



CMSgt Michael A. Evans

with three oak leaf clusters, the Air and Space Organizational Excellence Award, and the National Defense Service Medal. His campaign medals include the Afghanistan Campaign Medal with a Bronze Star and the Iraq Campaign Medal with a Bronze Star.

With over two decades of military service, Evans remains committed to advancing safety initiatives, improving force readiness, and mentoring future Air Force leaders. His leadership and expertise in Occupational Safety and risk management have shaped safety directives and contributed to the overall effectiveness of Air Mobility Command and the broader Air Force mission. As a senior leader, he continues to advocate for the integration of innovative safety strategies, ensuring that Air Force personnel remain prepared to meet the demands of modern military operations while maintaining the highest standards of safety and operational excellence. 👼

ASAP I LOSA I MFOQA I CRM/TEM

Mental Health and Performance in Aviation

BY MAJ BEN DICKTER, DEPUTY CHIEF, OPS RAMS, AVIATION PSYCHOLOGIST

"If you're really interested in high performance, you are going to require a certain level of cognitive literacy, meaning you have to understand what is going on in your brain and your body when you're performing." – Steven Kotler

ental health and wellness have become important topics in aviation, the Air Force, the military, and American society as a whole. The morbidity and mortality costs of untreated mental health disorders are incredibly high, and considerable resources have been directed toward combating those effects. Although there are resources available to support Airmen asking for specialty mental health treatment, few exist for the non-clinical or everyday concerns, meaning that aviators are expected to rely on internal or social resources to navigate the stressors of life. In other words, specialty treatment exists for clinical depression, but the individual is expected to coordinate his or her own resources (including social, spiritual, or other opportunities to reach out to others) to address, for example, the sadness of being apart from their family for the holidays. Before focusing on how to address such concerns, it is important to understand

the impacts that variations in mental health have on performance. This article will highlight some of the factors resulting in performance variations.

Mental health disorders are maintained in the Diagnostic and Statistics Manual of Mental Health Disorders (DSM-5-TR).¹ Although many disorders share characteristics that allow them to be classified in various categories, they all require functional impairment before consideration as a true disorder. In other words, mental health diagnoses require both specific symptoms (such as anxiety, flashbacks, or low mood) AND functional impairment either at work, at home, academically, or socially. Although that is an important distinction, it leaves open the fact that functioning is a moving target, and functioning can be reduced without crossing the line to impairment. Alcohol use is a good example of this spectrum of functioning. Reductions in reaction time, fine motor skills, reasoning, and information processing can be detected at blood alcohol (BAC) levels as low as 0.02 percent. This finding indicates that measurable degradation in performance is detectable after a single drink for an average adult male. However, impaired driving is not identified until 0.08 percent BAC in most states. This variance does not mean that safe driving between 0.02 and 0.08 percent BAC should not include some safety measures, such as slowing down, avoiding difficult driving environments, limiting distractions, or asking someone else to drive. A similar spectrum of performance degradation can be seen across other mental and cognitive states prior to reaching impairment.

Two of this month's Aviation Safety Action Program (ASAP) reports identify fatigue as a factor impacting the potential safety of the event. Most people have experience with considerable fatigue bordering on impairment. The existence of crew rest highlights the importance of alertness, attention, and many of the positive benefits of a full sleep period on performance and safety in flight. What about performance degradation prior to impairment associated with fatigue?

¹ American Psychiatric Association. 2025. Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR). https://www.psychiatry. org/psychiatrists/practice/dsm



Using BAC as an ongoing example, studies have calculated that staying awake for seventeen hours results in performance changes similar to a BAC of 0.05 percent (meaning, within the detectable range of loss of cognitive capability). A seventeen-hour awake period (e.g., waking up at 0600, falling asleep at 2300) can be considerably worsened by night shifts, alcohol consumption, stress, or other factors that interfere with the restful effects of sleep. Recognition of unraveling sleep habits is a necessary step toward mitigating the potential risk of delayed cognitive functioning in flight.

Stress represents another example of a non-clinical but relevant factor degrading performance. The typical eustress-distress dichotomy has been largely discarded by the psychology field due to the considerable value judgments placed on each term (i.e., one person's "good stress" is another person's "bad stress;" our values also change over time and what used to be a "good stress" may become a "bad stress" in retrospect. Weddings are a

great example of both). Instead, stress can be viewed as events that strain our cognitive, emotional, or behavioral responses to some degree. If the strain overwhelms an ability to function normally, then a mental health concern may be appropriate (consult with a medical provider, chaplain, or other resource if you believe this to be the case). However, what about the strains that may not impair one's overall ability to function? Stress of any type activates the hypothalamic-pituitaryadrenal (HPA) axis, resulting in a surge of hormones to key organs throughout the body. Appropriate activation of the HPA axis results in heightened attention, mood, energy, and even pain tolerance. However, excessive or lengthy HPA axis activation leads to what is typically known as the fight-flight-freeze response, which can lead to degradations in attention, concentration, vigilance, judgment, decision-making, sleep, digestive health, and the ability to manage future stress. Therefore, while a minor strain may not require specialty mental health treatment, when combined

with task saturation, mission pressure, environmental conditions, or any other aspects of performance and human factors, that initially minor strain may result in a potentially fatal performance failure. As an individual experiences increasing stress, the degradation in performance will continue to worsen, leading to increased risk. It is critical that aircrews build the self-awareness skills needed to monitor their stress prior to experiencing an in-flight emergency. Doing so provides the opportunity to engage in preventive measures to mitigate the performance risk.

Mood is a third example of a factor degrading performance and will be the last one discussed in this article. Major Depressive Disorder (MDD) is defined by a period of at least two weeks with significantly low mood or disinterest in once-enjoyable activities. MDD has been associated with significant reductions in mental capabilities, including difficulty thinking, poor concentration, emotion dysregulation, and limited decision-making capacity. Aircrews must be able to differentiate between impairment and degraded performance and the potential sources of that degradation if they are going to effectively mitigate any associated safety risks.



Oftentimes, MDD is recognized by others via slower physical actions, rapid fluctuations in appetite, and drastic changes in sleep patterns. If you or someone you know is struggling with depression, it is important to seek help from a medical professional or chaplain. For those experiencing the doldrums for a few days or just cannot seem to pull themselves together for the day, performance degradation can still exist, despite not reaching the concern of MDD. A low mood can act similar to stress, as the mind responds to internal inputs akin to real-world events. When considering the risks to performance, aircrews need to recognize the effects that a poor mood may have in the air as well as options for mitigating that risk as necessary.

Life does not happen in a vacuum, and it is possible, and indeed likely, that an individual could experience poor sleep, stress, and a low mood at the same time. The ASAP (and mishap) database contains a multitude of Airmen working through stress and fatigue to accomplish the mission. Risk Management (RM) worksheets are completed before every mission, attempting to identify and mitigate the hazards and risks of a given flight (when completing your next RM worksheet, consider which items are evaluating your degraded performance and which risks may be appropriate

to inform your aircraft commander so that they can make appropriate risk management decisions). Just as aircraft knowledge is critical to overcoming mechanical issues in the air, psychological knowledge is necessary to mitigate risks prior to an in-flight emergency. Aircrews must be able to differentiate between impairment and degraded performance and the potential sources of that degradation if they are going to effectively mitigate any associated safety risks.

KNOWING WHEN TO SEEK PROFESSIONAL MEDICAL CARE

Taking a moment to address the elephant in the room, I am aware of the concerns that aircrews have about reaching out to mental health professionals. As an aviation psychologist, I understand there are downstream effects of potential grounding for months at a time. I further recognize that a mental health clinic can seem like a "Black Box"—where someone walks in, and it is unclear what will happen when they walk out. It is not my job to convince you about what to do with your life. It is not my job to drag you into treatment against your will. It is my job to provide you with the information and transparency to make an informed decision for yourself. This article addresses the potential risks to performance with non-clinical concerns associated with changes in

mental health. The simple fact is that nearly all humans have performed effectively without optimized capabilities. The problem comes when our brains start to associate "effective" with "safe," and we stop mitigating risk (this mindset is the "I have driven drunk before and did not die, so I can do it again" effect). If you or someone you know is or has been struggling with mental health concerns, consider ways to mitigate the risk.

As a provider, we talk about seeking specialty mental health treatment as being similar to seeking care for a hurt foot. There is a point that you know it is hurt, and if you know you need help, then you should seek it quickly. It might just be a sprain (low mood) that needs a bit of ice and rest (chaplain or social support). However, if you keep running on it (ignoring the pain), it is susceptible to worsened outcomes. Once it worsens, you will be forced to take more drastic measures to maintain your career and life. Please know there are scientifically supported methods supporting the "Black Box" of mental health treatment, and the goal is to keep/return you to flying in a safe and, hopefully, more resilient manner. If medical care is still unpalatable, social, spiritual, and organizational systems are available to support you. No matter what the problem, the answer is always asking for help. 🧶

MOBILITY GUARDIAN 2025

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BY MS. JEANIE HOOD, HQ AMC FLIGHT SAFETY

ou are sitting at the hammerhead waiting for departure clearance. A line of weather is moving in to the north, the aircraft is filled with soldiers returning to the United States after a one-year deployment, and the winds have changed, so your takeoff data need to be adjusted. Stress is slowly creeping in as you start assessing the situation. Maintaining your mental composure and making accurate decisions are critical skills when transforming challenging situations into successful ones. Staying calm when faced with adversity or seemingly impossible situations helps us make rational decisions instead of reacting impulsively. However, staying calm under stress is not a simple task; it requires patience, practice, and perseverance.

Pilots face a multitude of mental demands that have the potential to burden not only inexperienced pilots but seasoned, expert pilots who have been flying for decades. Pilots encounter a variety of situations requiring split-second reaction times that could have long-lasting consequences if not handled correctly.

Workplace stress, burnout, and fatigue are pervasive concerns affecting employees across various

industries and professions, including high-pressure jobs such as piloting complicated, state-of-the-art aircraft. The consequences of these concerns can be severe, affecting not only the individual's well-being but also their job performance, relationships, and overall quality of life. The Federal Aviation Administration's Pilot's Handbook of Aeronautical Knowledge¹ defines stress as the body's response to the physical and psychological demands placed on it. The body responds to stress by releasing chemical hormones, such as adrenaline, into the blood and increasing metabolism to provide more energy to the muscles.

In the cockpit, mental workload and stress are two major factors that can affect a pilot's flight performance and decision-making process to the point that it can cause temporary cognitive incapacitation. Remember Cougar in the first "Top Gun" movie? He was involved in a dogfight with a Russian MiG and got so stressed out that he became incapacitated and lost all ability to communicate or think rationally. Temporary cognitive incapacitation is a phenomenon in which an individual's cognitive abilities are impaired, leading to a

¹ Pilot's Handbook of Aeronautical Knowledge. 2023. https://www.faa.gov/regulations_policies/ handbooks_manuals/aviation/phak decline in their mental functioning. Forgetfulness, rigid thinking, difficulty with concentration, constant worrying, and poor judgment are ways that stress can affect cognitive thinking. I think it is safe to say any of these effects could be devastating to military pilots and their planes.

Stressful situations are unavoidable, so being able to recognize what causes you stress is important. Some stress can be beneficial, but when stress becomes chronic or excessive, it can have a negative effect on physical and mental health, causing anxiety, depression, insomnia, and hypertension and can lead to burnout. Burnout is a state of emotional, physical, and mental exhaustion caused by excessive and prolonged stress, according to HelpGuide.org.² It is a form of fatigue caused by chronic workplace stress that has not been managed properly. The higher the individual or unit operations tempo, the higher the risk of burnout.

SYMPTOMS OF STRESS AND BURNOUT

Stress and burnout are significant concerns in the Air Force cockpit, where pilots often face high levels of responsibility, long hours, irregular

² Help Guide. 2025. Burnout Symptoms, Treatment, and Tips on How to Deal. https://www.helpguide.org/mental-health/stress/ burnout-prevention-and-recovery

SYMPTOMS OF STRESS AND BURNOUT



schedules, technical and operational demands, inclement weather and environmental conditions, and dangerous situations. Some of the specific factors that contribute to stress and burnout in Air Force pilots include the following:

- 1. High workload: Pilots are often required to perform multiple tasks simultaneously, such as flying the aircraft, navigating, and communicating with air traffic control.
- 2. Time pressure: Pilots are often under time pressure to complete missions.
- 3. Fatigue: Pilots may experience fatigue due to long duty days or flight durations, irregular or unpredictable schedules, inhospitable sleep environments, and jet lag.
- 4. Decision-making: Pilots are often required to make quick decisions in high-stress situations.
- 5. Isolation: Pilots may feel isolated and disconnected from their support network due to long periods away from home and limited opportunities for social interaction.

6. Physical demands: The physical demands of flying, such as gravitational forces, can cause physical stress and fatigue.

Let us focus on the fatigue factor for a minute. Fatigue is a lingering tiredness that is constant and limiting. Common factors contributing to pilot fatigue include disrupted sleep schedules, long work hours, jet lag, circadian rhythm disruptions, heavy workloads, and inadequate rest periods between flights. Does this scenario sound familiar? It can deteriorate cognitive functions, often with little warning, and can affect pilots' ability to perform their duties effectively and safely. According to Harvard Medical School's Division of Sleep Medicine,3 just one sleepless night can impair performance as much as a blood alcohol content of 0.10 percent, above the legal driving limit. This analogy shows how operating an aircraft under these conditions might prove to be deadly.

Dealing with stress and burnout is essential for maintaining overall well-being. Several ways to deal with stress include getting adequate sleep, exercising regularly, eating healthy, pursuing hobbies, positive thinking, journaling, meditating, and my favorite–laughing!

These tactics all sound great, but as Air Force pilots, we know that stress is unavoidable. Sometimes, pilots are not in charge of their schedule, nor do they have control over where they may end up tomorrow. Will I have time for exercise? What are the food options? Everyday stressors tend to pile up if we do not deal with them and keep them in check. We, as pilots, understand that stress is part of the job, and accepting the things we cannot change is one way to cope with it. Acceptance may be difficult, but continuing to try to change a situation you cannot change is meaningless. I have experienced this situation at work many times. A colleague of mine explained that many things in life are beyond our control and that we must learn to accept them because we cannot change them.

Air Force pilots have no easy button to push to make them feel less stressed; unfortunately, it is the nature of the job. Especially in today's Air Force, with the pool of pilots diminishing, pilots are being asked to do more than ever before. Do not let stress get the upper hand. A handful of tips and techniques can help you master stress management.

³ Harvard Medical School's Division of Sleep Medicine. 2025. Sleep and Health Education Program. https://sleep.hms.harvard. edu/education-training/public-education/ sleep-and-health-education-program/ sleep-health-education-89

the Sequel

Integrating Risk and Readiness ...

BY COL JOHN B. KELLEY, HQ AMC DIRECTOR OF SAFETY

was sitting in a Headquarters staff meeting the other day and somewhere between the budget update and community calendar my steely-eyed staff warrior discipline slipped and my mind began to wander. The random topic I landed upon was sequels of all things. Specifically, what makes some sequels work brilliantly and others fall flat? In today's media-saturated world, it seems like original stories are in short supply. Great original stories can be the genesis of other great stories though. Many revolutionary, expansive, or groundbreaking works come as sequels: The Odyssey is the sequel to The Iliad; the genre-defining Nevermind was actually Nirvana's sophomore album; and Season 2 of My Hero Academia brilliantly expanded on the characters and story (no spoilers-I'm not caught up on all the seasons). Based on my observations, a sequel needs to be grounded in the original while expanding the scope and complexity in an interesting and novel direction to be successful.

To be honest, my distraction with sequels was not as random a thought as it first appears — the Air Force Safety community is rolling out the second phase of its Integrating Risk and Readiness campaign. Like most good sequels, it takes the Chief of Staff of the Air Force's original message of risk-informed decisionmaking and expands it into new areas while maintaining the core theme. To refresh your memory, General Allvin's original Integrating Risk and Readiness Campaign Task Order (TASKORD) led with the following:

The primary goal of the campaign is the full integration of risk management principles and refocusing the force on operational discipline throughout all force development, training, career fields, and operational environments across the Air Force.

Phase Two of Integrating Risk and Readiness expands on this goal, ingraining risk-informed decision-making and operational discipline into the larger Air Force structure and culture. Phase Two is built around four pillars: Policy, Practice, Training, and Tools—better known by the initialism P2T2. Let us take each one in turn.

Though not the most glamorous pillar, carefully written **policy** is how the Air Force captures and communicates clear standards and expectations—usually in the form of Department of the Air Force (DAF) or Major Command (MAJCOM)



Chief of Staff Gen David Allvin speaks at the McAleese Defense Programs Conference in Washington, D.C., March 7, 2024. Allvin discussed future Air Force priorities and programs. USAF photo by Eric Dietrich



The beauty of having modules of RM included throughout an Airman's career is that everyone has a common language to discuss risk, opportunity, cost, and decision-making, regardless of where they are in their Air Force journey.

instructions, manuals, and directives. The Air Force Safety Center is updating applicable DAF publications to include Risk Management (RM) principles and briefing new Wing Commanders on how to draft their commander's intent with RM in mind. Certainly, AMC Safety will follow suit with updates of its own publications. So, if you are a risk management genius and policy-writing athlete with some free time, send me an email—I have a deal for you!

Practice, on the other hand, is where the RM rubber meets the road. Translating risk and decision principles from the pages of a manual to a field exercise is, like most things, easier said than done. As my father, a Vietnam veteran and English teacher, used to remind me: "No one ever learned to swim from a book—at some point, you have to jump in." Exercise planners in every MAJCOM are busy building RM scenarios into the planning, execution, and evaluation of many large-scale exercises on the horizon, including MOBILITY GUARDIAN 2025 and REFORPAC 2025. These exercises will have safety professionals acting in their "blue force" combat role to preserve combat capability and enhance mission effectiveness. For those who aren't card-carrying safety pros, risk-informed decisionmaking will be crucial to successful Agile Combat Employment and

communications-denied employment during the exercise "fun."

Investing in the right **tools** for the job will make effective RM far easier to incorporate across all MAJCOMs. The Air Force Safety enterprise is hard at work fielding new capabilities from the Joint Risk Assessment Tool to an AI-informed risk dashboard for unit and squadron commanders. Our most recent success is the release of the SAFEREP app, combining most safety reports into a one-stop tool for all Airmen to use on personal and official devices (available for both Android and iOS.) All these tools are designed to make risk understanding more natural and seamless in everyday Air Force work and life.

No campaign would be complete without a **training** pillar. Risk management principles are being included in every level of Air Force Professional Military Education and commander/supervisor training. The beauty of having modules of RM included throughout an Airman's career is that everyone has a common language to discuss risk, opportunity, cost, and decisionmaking, regardless of where they are in their Air Force journey.

As sequels go, Phase Two is a doozy! With the ultimate goal of achieving an enduring baseline of risk management and understanding across the Air Force, Phase Two needs to be both deep and wide. Phase Two expands the approach of the original TASKORD while keeping the original themes: Risk management and operational discipline are integral to Airmen's safety in peacetime and combat effectiveness in times of conflict. That is a sequel we can all support.

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Cadet 4th Class David Miller shakes his father's hand at the Air Force Academy, Colorado Springs, CO, circa 1974.

Before I close, I want to take a moment to celebrate the career of a consummate Safety professional and AMC warrior who is embarking on his own sequel: Mr. David Miller, Deputy Director of AMC Safety, who will be retiring this summer after nearly twenty years. He has been central to AMC Safety, providing guidance, wisdom, and leadership. The world-class organization that is AMC Safety is due in large part to his commitment to Airmen's safety and AMC's combat prowess. Thank you Dave!

"Two—Cleared to Depart Formation—Aim High!"



101 CRITICAL DAYS OF SUMMER: Fun in the Sun!

ummer is the time to enjoy warm, sunny days safely. The 101 Critical Days of Summer (101 CDS) focuses on preventing the annual spikes in injuries and accidents between Memorial Day and Labor Day. For the Department of the Air Force (DAF), these accidents not only impact individuals and their families but also mission readiness and force lethality.

DAF saw an increase in injuries during 101 CDS in 2024, amounting to 1,477 injuries, up from 1,425 in 2023. Over the past six years, DAF has seen a slight decrease in overall injuries and accidents; however, the number of injuries is still more than zero, and the use of risk-informed decisionmaking in all summertime activities will help prevent unnecessary injuries or accidents.

BY MS. LISA GONZALES, AIR FORCE SAFETY CENTER

The risks associated with summertime activities can be avoided by performing a risk assessment beforehand (or taking a risk management refresher course if you have not completed one in some time). Start by making a list of essential items that you will need for the activity. At a minimum, the list should include an emergency medical kit with medications and first aid supplies, plenty of water or drinks containing electrolytes, and food high in potassium and protein if the activity is strenuous. Remember to never leave Mother Nature up to chance when gathering supplies and prepare for the unexpected.

When it is time to have fun, wear sunscreen with an SPF of thirty or higher when out playing in the sun or the water, as the sun's ultraviolet rays reflect off the surface and can damage the skin. Using sunscreen will help prevent sunburn or other skin conditions. According to the National Cancer Institute,¹ skin cancer, also known as melanoma, will have an estimated 100,640 new cases in 2024. Therefore, use sunscreen lotion, not forgetting the top of your ears and nose.

For similar reasons, consider using sunglasses that protect from ultraviolet A (UVA) or ultraviolet B (UVB). Such glasses have an ultraviolet (UV) rating of UV400 to protect the eyes from the sun's UV rays. According to the National Eye Institute,² UVA and UVB rays can cause multiple eye problems such as early cataracts, pinguecula, and pterygium.

When engaging in strenuous physical activity outdoors, such as playing sports in the sun, take frequent breaks to cool down and hydrate with water or drinks that contain electrolytes. Avoid caffeinated or alcoholic drinks as they have a dehydrating effect on the body. Be sure to know the symptoms of heat exhaustion or heat stroke and how to treat them. Call 911 and move them to a cooler place if you notice someone in heat distress. Try to lower their body temperature

For additional information on 101 CDS, visit: https://www.safety.af.mil/Divisions/Occupational-Safety-Division/Summer-Safety/.

with cool cloths or a cool bath. While waiting for first responders to arrive, continue to cool their body down; do not give the person anything to drink.

Another summertime favorite is swimming or playing games (e.g., Marco Polo) in the ocean to cool down. When doing so, be cautious as rip currents—powerful, narrow channels of fast-moving water that move away from the shore—can form without warning. According to the National Weather Service,³ rip currents cause more than one hundred drownings at the beach each year in the United States. If caught in a rip current, swim parallel to the shore to escape it, and never swim alone.

Moreover, as the days get longer, the desire to head into the great outdoors and take a long-anticipated motorcycle ride grows, as does the desire for camping or hiking. Before venturing out, plan for the unexpected, as the weather can change in the blink of an eye. To prepare, make a list of weatherrelated items you will need, such as blankets, jackets, food, and water. Once plans for your outing are set, share them with family and friends.

Hiking can be strenuous, depending on where you hike or if the hike will be overnight. If the plan is an overnight hike, headlamps, water filtration devices, light layers of clothing, a tent, a sleeping bag, and foods high in protein should be on the list. Plan out your trip by making a map of the area you will be. Hiking poles can help with your balance and stability in the steep ascents or descents and help protect the knees. Stretch out muscles to warm them up before and after the hikes. Stretching before strenuous activities can help you stay limber and free of injury.

Before taking that first motorcycle ride, be sure to check the weather and road conditions and conduct a T-CLOCS check on your motorcycle to ensure its parts are working correctly:

> Tires and wheels Controls Lights and electrics Oil and other fluids Chassis Stand

Once the motorcycle is ready for the road, verify the riding gear you will need, such as a helmet, gloves, longsleeve shirt or leather jacket, pants, and over-the-ankle boots. For additional safety gear, consider packing rain gear and an airbag vest.

The avid mountain biker will need bike supplies, personal protective gear, and riding gear that covers weather changes. Biking tools should include an air pump with several needles, gear adjustment tools, and extra tubes or slime to fix a flat tire.

"Summer is a time to relax and have fun in the sun, but do it responsibly by incorporating risk management in[to] all your summertime activities," said William "Bill" Walkowiak, Chief of Occupational Safety at the Air Force Safety Center. "Risks are in everything we do, so this summer, before you start an activity, do a risk assessment to help lower the risks involved for a safer summer."

¹ National Cancer Institute. 2022. Cancer Stat Facts: Melanoma of the Skin. https://seer.cancer. gov/statfacts/html/melan.html.

² National Eye Institute. n.d. Protecting Your Eyes From the Sun's UV Light. https://www. nei.nih.gov/about/news-and-events/news/ protecting-your-eyes-suns-uv-light.

³ National Weather Service. n.d. NOAA and USLA Rip Current Safety Toolkit. https://www. weather.gov/safety/ripcurrent-toolkit.

Air Force Activates Air Task Force at Scott Air Force Base

BY MR. JACOB SILVA-DREYER, 375TH AIR MOBILITY WING PUBLIC AFFAIRS

he 12th Air Task Force (12 ATF), the first ATF under the new Air Force deployment model, was officially activated during a ceremony at Scott Air Force Base, IL, Sept. 4, 2024.

Lt Gen Randall Reed, Air Mobility Command Deputy Commander, handed the guidon to Col Gabriel Arrington, who, along with CMSgt Chastity Hert, Command Chief, will lead the new unit.

"The way we organized, trained, and deployed over the past two decades to fight the war on terror was efficient but not effective to endure global competition," Reed said. "The ATF paves the way for a fundamental change for our Air Force where deployed units prepare together, execute together, and win together. As we make this shift, the ATF will show us how."

The Mobility Forum

ATFs will allow the Air Force to provide a definable unit of action and establish a sustainable pace for posturing forces. Rather than the old deployment model, which often deployed individuals and units who were unfamiliar with each other to the same locations, members of an ATF will deploy already having worked and trained together through the Air Force Force Generation cycle.

12 ATF's mission is to be the Air Force's ready unit of action for competition and combat as part of a major step in evolving its force generation model as the Air Force shifts with a sense of urgency toward the Great Power Competition.

The weight of his new unit's mission is not lost on Arrington.

"This new task force could not exist without the dedication of all of you," Arrington said, addressing the attendees. "The Airmen who

A 12th Air Task Force (ATF) Airman practices base operations protocol during a field exercise at McGregor Range on the Fort Bliss Training Complex in New Mexico, Jan. 19, 2025. Activated in September 2024, the 12th ATF is part of the new Air Force deployment model, called Air Force Force Generation, or AFFORGEN. **Observer, Controller/Trainers** from the Army Reserve's 5th Armored Brigade at Fort Bliss have been training Air Force ATFs in security operations since last fall.

Photo by David Poe

make up this task force will be able to train and deploy with greater efficiency and be more missionready than ever before, and I am honored to be leading you in this new environment."

Approved by Secretary of the Air Force Frank Kendall in 2022, Air Task Forces consist of a command element with an attached expeditionary A-Staff and Special Staff, a Combat Air Base Squadron, and Mission Generation Force Elements with attached Mission Sustainment Teams.

As part of the pilot program, five additional ATFs are scheduled for activation across the United States in the coming months.

"I have full confidence in the future of [12 ATF]," Reed said. "Their activation reiterated the Air Force's continued support and commitment to evolving airpower to fight and win."



BY MR. ROBERTO S. AGUILAR JR., COMMAND NUCLEAR SURETY MANAGER

uclear Surety and Air Mobility Command (AMC) are critical aspects of the U.S. Air Force's (USAF) mission to maintain safe, secure, and effective nuclear capabilities while supporting global air mobility operations. Nuclear surety refers to the measures, programs, and protocols designed to ensure the safety, security, and reliability of nuclear weapons and their associated systems. The goal of nuclear surety is to prevent accidents involving nuclear assets as well as unauthorized access to, misuse of, or malicious acts with nuclear assets. To help continuously achieve this goal, the four key pillars of nuclear surety were established. They include:

- 1. **Safety:** Prevent nuclear accidents or incidents that could harm personnel or the environment.
- 2. **Security:** Protect nuclear weapons from unauthorized access, theft, or sabotage.
- 3. **Reliability:** Ensure nuclear weapons will perform as intended if authorized for use.
- 4. **Control:** Prevent unauthorized use of nuclear weapons.

USAF implements the four pillars of nuclear surety through rigorous training programs, continuous maintenance and inspections,

advanced security measures, and the Nuclear Weapons Personnel Reliability Program (PRP), which helps to ensure that individuals with access to nuclear weapons are trustworthy and competent. According to the Department of the Air Force Manual 13-501, "PRP is a critical link in nuclear surety. PRP-required screening programs, personnel security investigations, and the PRP continuous evaluation requirement are designed to mitigate risks and protect the nuclear deterrent from insider threats. As such, PRP-supporting [Department of Defense] Component heads and supervisors must aid reviewing and certifying officials in their initial and continuing evaluation duties by ensuring they are provided all relevant information on those trusted with PRP duties."1 Moreover, per this manual, only individuals demonstrating the highest levels of integrity and dependability are assigned PRP duties; PRP ensures that each person trusted with U.S. nuclear weapons, nuclear command and control systems and equipment, positive control materials, and special nuclear material, meets the highest levels of reliability.2

A KC-135 Stratotanker assigned to the 6th Air Refueling Wing sits on the flight line during a Nuclear Staff Assistance Visit at MacDill Air Force Base, FL, June 12, 2024. Exercises such as the NSAV help to reinforce an effective nuclear response and maintain a modern, flexible and always ready nuclear deterrent force.

USAF photo by Amn Monique Stober

AMC, a major command of USAF, is responsible for providing global airlift, aerial refueling, aeromedical evacuation, and global air mobility support. In managing these responsibilities, AMC plays a vital role in the nation's nuclear enterprise by enabling rapid deployment and sustainment of nuclear forces and supporting strategic deterrence. AMC's role in nuclear surety includes the airlift of nuclear-related materials, ensuring the secure transport of nuclear weapons, components, and personnel to strategic locations; aerial refueling, refueling strategic bombers and other assets involved in nuclear deterrence missions; support for Strategic Forces, supporting intercontinental ballistic missile operations by delivering equipment, personnel, and supplies; and global reach, providing the logistical backbone for nuclear operations, enabling U.S. forces to maintain readiness worldwide.

By combining the principles of nuclear surety with AMC's global reach and operational capabilities, USAF ensures that the United States maintains a credible and effective nuclear deterrent while prioritizing safety and security.

¹² Department of the Air Force. 2024. "Enclosure 3: Procedures," *Department of the Air Force Manual 13-501*. https://static.epublishing.af.mil/production/1/af_a10/publication/ dodm5210.42_dafman13-501/dodm5210.42_ dafman13-501.pdf.



The Plane's Legendary Place in History

BY MS. TIFFANY L. TOLBERT, STAFF WRITER

n Sept. 26, 2024, the 9th Air Refueling Squadron (ARS) at Travis Air Force Base, CA, retired the last of Air Mobility Command's advanced tanker and cargo aircraft, the KC-10commemorating its forty-four-year legacy. With more than 140 combatready personnel and a plethora of equipment, the 9 ARS mobilized and deployed twelve KC-10s to anywhere on the globe at a moment's notice by generating strategic airlift and aerialrefueling missions that supported U.S. and allied forces during contingency operations.¹ In a conversation with U.S. Air Force (USAF) Lt Col Andrew Baer, 9 ARS Commander and KC-10 Extender Pilot, the importance and historical significance of the KC-10 becomes clear.

As retold by Baer, the KC-10 was born in the aftermath of OPERATION NICKEL GRASS in 1973, an aerial resupply mission in support of Israel, during which the USAF C-5 cargo transports were denied landing rights at key airfields along the route. Under such restrictions, C-5s carried reduced cargo loads and relied on long-range air refueling provided by the venerable KC-135 fleet. Despite operational success, these missions revealed a gap in the USAF's air refueling capacity. To address this gap and pinpoint a larger aerial tanker aircraft, the Advanced Tanker Cargo Aircraft Program was launched in 1975. The program consisted of the greatest aircraft of the day-the C-5 Galaxy, Boeing 747, Lockheed L-1011, and Douglas DC-10—competing against one another to determine which would become America's next great tanker. The DC-10 emerged as the ultimate choice and was shortly thereafter ordered as the KC-10 Extender. The aircraft first flew in July 1980, entered service in March 1981, and saw

its first combat in Grenada during OPERATION URGENT FURY in 1983. The aircraft, Baer recalled, "first served under Strategic Air Command and eventually was assigned to Air Mobility Command."

When asked how its function has helped influence national defense strategies, Baer declared that the KC-10 Extender was a stalwart of the USAF refueling fleet. "Unlike the venerable KC-135 or state-of-the-art KC-46, the KC-10 provided a unique capability – an absolutely staggering quantity of fuel ready for offload. When that unmatched capacity is coupled to the aircraft's long range, high speed, and sizeable cargo and passenger capacity, the KC-10's unique influence becomes clear," he stated. Delving more into the iconic aircraft's characteristics, Baer said, "The aircraft can escort a group of receiver aircraft, with their maintenance personnel and spare parts, anywhere in the world without a supporting cargo aircraft or additional tankers. Even the vast expanses of the

¹ Travis Air Force Base. "9th Air Refueling Squadron." Travis Air Force Base Fact Sheets. https://www.travis.af.mil/Units/Fact-Sheets/ Article/150645/9th-air-refueling-squadron/.



The last U.S. Air Force KC-10 Extender takes off from the flightline during the KC-10 farewell ceremony at Travis Air Force Base, CA, Sept. 26, 2024. As the final base to operate the KC-10, Travis AFB had the honor of bidding farewell to an aircraft that has been a vital component of the U.S. military's global reach and power projection capabilities. This ceremony marks the closing of an important chapter in the history of military aviation.

USAF photo by Kenneth Abbate

Indo-Pacific were no match for the capability of a fully fueled KC-10." Simply put, "The KC-10 aircraft had an unmatched capability to put an immense offload of fuel anywhere in the world," Baer exclaimed.

"This rapid-response, multi-role capability, across any range or duration, made the KC-10 legendary for its versatility and opened new options for the United States over its [more than] forty years of service," Baer continued.

The KC-10 served meritoriously in the Indo-Pacific and with honor and distinction across the Atlantic, Europe, and Southwest Asia. "No matter where these aircraft flew, their unique tri-jet profile and American flag emblazoned on its tail-flash served a symbol of hope ... In October of 2023, the last KC-10s returned from contingency operations in Southwest Asia. This return ended a thirty-three-year legacy of combat KC-10s—a momentous occasion."

The KC-10's legacy includes being present in nearly every major conflict and operation the USAF has executed since its first flight and entry into operational service. Following the

aircraft's debut in OPERATION URGENT FURY (Grenada), the KC-10 appeared in OPERATIONS ELDORADO CANYON (Libya), JUST CAUSE (Panama), ALLIED FORCE (Yugoslavia), and others in the Middle East, such as OPERATION SOUTHERN WATCH, NORTHERN WATCH, DESERT SHIELD, DESERT STORM, ENDURING FREEDOM, IRAQI FREEDOM, NEW DAWN, INHERENT RESOLVE, and ALLIES REFUGE, "just to name a few." Baer asserted. "Essentially, anytime the USAF wanted to project power, you could count on a KC-10 to fuel to fight." For forty-plus years, Baer said that the KC-10 has been "making the impossible seem effortless and demonstrating the unmatched global reach of the USAF."

Baer contends that the KC-10's main attribute is not the amount of equipment it can carry or the lineage of its airframe, "It's the people—the community of professional aircrew and support personnel who made this jet fly." Baer feels that 9 ARS, as the last active duty KC-10 squadron in the world, set the "Gucci standard every single day and I like to think we did our predecessors proud when we safely landed the KC-10 on its final trip in September 2024."

Baer highlighted that the KC-10 is among those few USAF fleets to have never suffered a total loss in flight although, in 1987, KC-10 aircraft 82-0190 burnt down in a ground accident at Barksdale AFB, reducing the fleet from sixty to fifty-nine tails. Today, all remaining fifty-nine aircraft are safely retired in museums or in the Aerospace Maintenance and Regeneration Group.

"We will all miss the jet's speed, capability, and dependability. There is just something magical about firing up those three giant General Electric engines, rolling out those huge flaps and slats, and taking flight in some of the world's last DC-10 variants. But what I think we'll all miss most is the community of professional aircrew and support personnel who made this jet fly," Baer stated. "As we look back on and appreciate the legendary history of the KC-10, I look forward to creating the same sense of community and tradition as the 9 ARS continues conversion to our new aircraft in the KC-46." Baer and his squadron look forward to continuing to serve proudly in the USAF, flying America's next great tanker. 👹

Department of the Air Force Safety Announces Next Generation Safety Reporting

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he next iteration of digital safety reporting is here with the release of the new SAFEREP App. SAFEREP is the Department of the Air Force's only completely digital safety reporting tool supporting all disciplines and areas around a base, with dedicated reporting features for workplace, traffic, industrial, flight, weapons, and space safety. Replacing the Airman Safety App, SAFEREP reflects a broader reporting capability that encompasses more functional areas and other military services.

SAFEREP will allow users to submit more than just hazards. Users from every career field will be able to voluntarily submit workplace and installation hazards, unintentional errors, and supervisor's mishap reports. Aviation-specific reports are also available to aircrew and maintainers. SAFEREP will also break out the different operational disciplines to provide a clear distinction between avenues of reporting. All data are passed to the appropriate major command or down to the installation, and resources can be allocated to resolve issues.

"Anyone can use SAFEREP, regardless of rank, pay grade, uniformed or civilian status, or occupational specialty," said Jason Wollard, SAFEREP program manager. "If an Airman or Guardian thinks the issue could cause damage, injury, illness, result in a serious incident, or an accident, then they should use the app to report the concern to their safety office. They should also let their supervisor know as soon as possible, especially if they were involved in an accident or were injured."

All SAFEREP users will be able to quickly and easily tell Safety about issues in the dorms, at work, or anywhere on base. Dangerous conditions, near misses, and cultural issues that could lead to an accident can all be reported using the app. Addressing these issues and learning from mistakes helps prevent injury and damage while also creating a better work culture and environment.

Aircrew, including maintainers, aerial port workers, and airfield operations, can report hazards related to in-flight operations, maintenance operations, or issues on the ramp. In addition, aircrew can submit aviation-specific reports, including Aviation Safety Action Program (ASAP) reports and other required safety reports, such as hazardous air traffic reports, wildlife strikes, unusual occurrences, or in-flight emergency reports. Serious aviation hazards, near misses, and aviation ASAPs provided to SAFEREP are posted to the SAFEREP display to enable community-wide visibility on the issue.



SAFEREP is the Department of the Air Force's (DAF's) premiere safety digital reporting tool ... It empowers Airmen and Guardians to speak up about issues they see and mitigate risks before they cause a mishap."

"Safety professionals are experts in their work areas and know what 'right' looks like," said Wollard. "However, Safety can't be everywhere, all at once, all of the time. SAFEREP allows Airmen and Guardians to inform Safety about hazardous conditions or cultural issues that concern them."

Reporting in SAFEREP is simple. Users can either download the app or go to the SAFEREP website. Once there, users will select their service and the type of report being submitted, and then the app will guide users through the rest. Submissions to SAFEREP can also be made while on temporary duty to report concerns to the local safety office. Users have the option to submit a report anonymously. "SAFEREP is the Department of the Air Force's (DAF's) premiere safety digital reporting tool," said Maj Gen Sean Choquette, DAF Chief of Safety and Air Force Safety Center Commander. "It empowers Airmen and Guardians to speak up about issues they see and mitigate risks before they cause a mishap. By preventing mishaps before they happen, we increase our readiness and create more lethal Air and Space Forces."

If users already have the Airman Safety App downloaded, they will not need to download a new app because SAFEREP will automatically update. If users are not online or not connected to the internet, SAFEREP will store up to one hundred draft reports until connected to the internet to complete the submission. Temporarily, the Airman Safety App website will redirect users to SAFEREP, but the Airman Safety App will be fully discontinued at a later date.

For more information on how SAFEREP reporting works, go to https://www.safety. af.mil/home/saferep.

To make a report, access the SAFEREP website at https://saferep.safety.af.mil or download the SAFEREP App from your app store.

Apple: https://apps.apple.com/us/app/ saferep/id1406996346

Android: https://play.google.com/ store/apps/details?id=net.afsas. asap&hl=en_US

Warrior's Edge: Mindfulness for High Performance

BY MS. LAUREN FOSNOT, STAFF WRITER

ho in this room wants to be a badass at what they do?" asked Dr. Jannell MacAulay, silencing the room of lively, chattering conference attendees—Air Mobility Command (AMC) Airmen. MacAulay, a speaker at the 56th Annual Airlift/ Tanker Association (ATA) Symposium in Grapevine, TX, scanned the room, taking in the many hands thrust into the air—an expected response as AMC Airmen accomplish badass feats daily.

Later in her presentation, MacAulay asked another question-one to elicit a volunteer. The hands that were once held high seemed glued to attendees' laps. MacAulay walked everyone through what they may have felt when she asked this question. "Now, here's the part of this session where it's going to sound like I'm inside your head," MacAulay said with a sly grin. She speculated that their heart rates may have become elevated, their palms may have started sweating, and the little voice in their heads may have said, "Oh no, oh no, don't pick me." The collective nodding of heads and nervous chuckles hinted that MacAulay's theory was indeed correct.

The human performance specialist explained that similar biological processes may have happened to individuals who were, on the flip side, eager to volunteer. When people get out of their comfort zones and take risks, they experience stress, which MacAulay considers a positive term. Stress is caring about the task at hand and facing challenges, she explained. It is beneficial until it takes the lead, calling the shots. When *stress* leads to worry and panic, it shifts to what MacAulay calls *distress*.

Although AMC Airmen are undoubtedly risk-takers, no one is immune from shifting into varying levels of distress—not even MacAulay, a combat veteran who served twenty years in the U.S. Air Force as a pilot, commander, special operations consultant, international diplomat, and professionalism instructor.

MacAulay views distress as uncontrolled stress, which can have health and performance consequences and ultimately lead to burnout. "This [distress] is why people choke at



stress

things," she explained. "You can be completely capable of landing a plane, and you're not going to do well if you're in distress."

She spoke candidly about her own struggles with distress and burnout as a military leader and military spouse. She overviewed a cycle that seemed to resonate with many Airmen in the room: the never-ending feeling of postponing self-care or family time until a training program, degree, command position, and so on is over, only to find another challenge in its place. "But what happens when you hit that milestone? What's right behind it? Another one, right?" she reminded those in the room.

MacAulay was caught in this vicious cycle but found the way out. Through her trials, she discovered the secret of harnessing stress and preventing distress—mindfulness. In her ATA presentation, she emphasized that training the mind is essential for achieving long-term success and resilience—and could be a major asset for the future fight.

Now a trailblazer in high-performance mindset training, MacAulay shared practical strategies to empower attendees to excel personally and professionally. One of the core tools MacAulay shared was mindfulness, which she referred to as "mental pushups." This practice helps sharpen focus and reduce stress by bringing awareness to the present moment. To demonstrate, she led the audience through a one-minute mindfulness exercise, teaching them to focus on their breath and gently redirect their thoughts when distractions arose.

Deep, slow breathing that lifts and fills the diaphragm, especially with a longer exhalation, stimulates the vagus nerve, which helps shift the nervous system from a state of stress or "fight or flight" to a state of relaxation or "rest and digest."

This state "increases our cognitive capacity—our brain power, our working memory," MacAulay said. It fosters attentiveness as well. A wandering mind is something all Airmen can fall victim to—even leaders. MacAulay pointed out that a leader losing focus in a one-on-one with an Airman, or vice versa, can impact morale, precision, and overall teamwork. The best teams are mindful teams because their effects are crucial assets in today's military environment.

Mindfulness has been showcased in workplaces, on sports teams, and in the military. A study conducted at Luke Air Force Base, AZ, demonstrated that mindfulness practices improved Dr. Janell MacAulay discusses strategies for recognizing and managing stress during a Mindful Foundations session at Hanscom Air Force Base, MA, Sept. 7, 2023.

USAF photo by Jerry Saslav

the reaction times of fighter pilots—by two and a half seconds. A seemingly small amount of time, two and a half seconds could mean life or death in the air. Another study showed explosive ordnance technicians enhance their operational efficiency tests by almost a minute and a half.

MacAulay hopes that just as aerobic exercise has become mainstream, mental repetitions will as well. "You are going to work on rewiring your brain. Mental reps are as important as physical reps," she emphasized. "We need to get into a space where we can be high performing, connected, paying attention, focused, thriving in the things that we do. It ties to readiness."

Her mission is clear: to prepare leaders and help teams excel under pressure and connect deeply with each other in the process. "What feels even better when we do hard things is not doing them alone but doing them together," she said.

Through her collaboration with Pete Carroll of the Seattle Seahawks and high-performance psychologist Dr. Michael Gervais, Dr. MacAulay continues to develop programs that integrate mental fitness with physical and technical skills so that today's AMC Airmen are as cognizant and connected as possible.

"Don't Cross the Streams!" Electronic Warfare and How It Affects Air Force Mobility

ike proton streams in the iconic 1980s film *Ghostbusters*, electronic warfare (EW) and the electromagnetic spectrum (EMS) seem like elusive concepts. The main difference is that although crossing the streams "would be bad," not understanding how to use and counter EW could be the difference between going home victorious or the victory going to the adversary.

EW is one of the few types of warfare that affects all military domains, which include land, air, sea, space, and cyberspace.

EMS is a range of frequencies for electromagnetic energy, including radio waves, microwaves, millimeter waves, infrared, visible light, ultraviolet light, x-rays, and gamma rays. Sounds crazy, right? Well, as crazy as it sounds, EW senses, communicates, protects, disrupts, denies, or degrades an adversary's or your own signal use. Numerous ways exist to address electronic warfare threats. Still, the most readily available methods and tactics include integrating specialized electronic warfare systems into aircraft, relying on dedicated electronic warfare support from other units, and employing agile combat employment to maneuver and reduce exposure in contested environments. These tactics include training crews to identify and mitigate enemy electronic threats while maintaining mission effectiveness in hostile airspace.

Key points about Air Mobility Command (AMC) and electronic warfare encompass:

Dedicated EW Aircraft Support.

AMC primarily relies on dedicated electronic warfare aircraft like the EC-130 Compass Call to provide active electronic attack capabilities against enemy radars and communications, creating a protective umbrella for AMC aircraft during operations. Maintainers at Bagram Air Base, Afghanistan, stand by as the aircrew starts the engines on an EC-130H Compass Call. The aircraft is assigned to the 41st Expeditionary Electronic Combat Squadron, Davis-Monthan Air Force Base, AZ. The Compass Call is an airborne tactical weapon system used to deny, degrade, and disrupt the enemy's ability to communicate.

> USAF photo by Capt James H. Cunningham

BY MS. DARA MARLAR, STAFF WRITER

Onboard EW Systems. AMC aircraft like C-17s and C-130s are equipped with basic electronic warfare systems, including radar warning receivers and electronic countermeasures, to detect and counter threats.

Tactics and Training. AMC emphasizes training crews to understand and react to electronic threats, including employing evasive maneuvers, altering flight paths, and using electronic countermeasures when necessary.

Agile Combat Employment (ACE).

AMC leverages ACE tactics to rapidly move aircraft between dispersed locations, making it harder for adversaries to target and track them in contested environments.

Coordination with Other Forces.

AMC closely coordinates with dedicated electronic warfare units in combat scenarios to gain situational awareness and suppress enemy electronic capabilities.

Good Dental Health Leads to Good Overall Health

BY MS. SOFIA SCHATZ, STAFF WRITER

Ithough everyone wants to avoid cavities, dental health extends far beyond tooth decay. In fact, poor oral health has been linked to a range of serious health problems, such as periodontal (gum) disease, dental erosion, heart disease, and even Alzheimer's disease.

Fortunately, you can take control of your dental health by taking the necessary steps to avoid health issues. Most people know good oral habits, including brushing their teeth for at least two minutes twice daily and flossing once daily. The most overlooked aspect of maintaining dental health, however, is diet. Brushing and flossing are crucial for oral hygiene; however, maintaining a diet focused on beneficial nutrition and avoiding harmful foods are often overlooked ways to protect dental health and reduce the risk of more severe health conditions associated with poor oral care.

Research shows that poor oral health is not just about cavities and gum disease; it can lead to serious health complications throughout the body. The American Academy of Periodontology explains that periodontal disease occurs when inflammation in the gums and surrounding tissues causes them to pull away from the teeth, forming gaps or "pockets" that trap bacteria. Plaque buildup around the teeth triggers an immune response, damaging the structures that hold the teeth in place.

Periodontal disease leads to bone loss, causing teeth to become loose or even fall out. Although periodontal disease mainly affects the mouth, the inflammation and bacteria associated with it can spread beyond the gums, increasing the risk of other serious health issues, including heart disease, stroke, certain cancers, and Alzheimer's disease. For instance, bacteria from gum infections can enter the bloodstream, causing systemic inflammation and potentially promoting plaque buildup in the arteries, which raises the risk of heart attack and stroke. Gum disease has also been linked to cancers such as breast and oral cancer. It can lead to a weakened immune system, which hampers the body's ability to detect and destroy cancer cells. Tooth loss from gum disease or decay may also increase the risk of developing dementia. Research suggests that Alzheimer's patients tend to have worse gum health-with more plaque, bone loss, and gum bleeding—compared with those without the disease.

Nutrition plays a critical role in dental health; poor food and drink choices can cause the development of periodontal disease. Limiting the consumption of sugar and sugary drinks is essential because excessive intake of sugar can lead to a buildup of plaque, which contains bacteria that attack the gums and teeth. Over time, bacteria can cause inflammation in the gums, leading to periodontal disease. A diet high in vitamins and minerals, such as vitamin C, calcium, and antioxidants, helps strengthen gums and prevent gum disease. Another item to limit is acidic beverages such as soft drinks, which can erode tooth enamel. Instead, focus on foods that promote oral health, such as leafy greens, dairy products, and crunchy fruits and vegetables, which help clean teeth naturally. Drinking plenty of water, especially after meals, can also help rinse away food particles and reduce the risk of plaque buildup. By making mindful food choices, you can support your overall health and your dental health, reducing the risk of gum disease and other health issues.

In conclusion, maintaining good dental health goes far beyond just preventing cavities. The impact of poor oral care can extend to serious health complications. Although brushing, flossing, and regular dental checkups are essential, the often-overlooked factor of nutrition plays a vital role in supporting oral health. By focusing on a diet rich in vitamins and minerals, avoiding harmful sugary and acidic foods, and staying hydrated, you can protect your teeth and gums and reduce the risk of more severe health conditions. Ultimately, taking responsibility for your dental care is key to preserving your smile and overall well-being, proving that the health of your teeth is truly an investment in your long-term total health. 🥮

Enhancing Rider Safety: The Role of Motorcycle Airbag Vests

BY MS. BRIE CHRISTIAN, STAFF WRITER

lthough motorcycling offers unparalleled freedom on the open road, its liberation comes with inherent risks. In 2022, 6,218 motorcyclists were killed fifteen percent of all traffic fatalities. Data produced by the National Highway Traffic Safety Administration show that this considerable portion of fatalities is the highest number of motorcyclists killed since 1975.¹ The Air Force Safety Center recorded that in the last five years, we have lost eighty-eight Air Force personnel to motorcycle deaths. Despite the safety advancements in modern motorcycles and in motorist awareness. motorcyclists remain vulnerable to accidents. Airbag vests have emerged as a plausible solution in mitigating such risks. This article explores these vests, their pros and cons, and their effectiveness in protecting riders.

EFFECTIVENESS OF AIRBAG VESTS

Blunt force trauma—a leading cause of severe injuries and fatalities among motorcyclists—can be caused when a crash propels a motorcycle rider forward, leading to high-impact



collisions with the ground or other objects. Such impacts often lead to severe head, neck, and torso injuries.

Studies show that airbag vests help absorb impact forces, reducing injury severity. Other benefits of airbag vests include:

- Reduction in Forward Momentum: Riders wearing airbag vests experience a significant decrease in forward momentum during a crash; some studies indicate nearly a sixty-percent reduction.²
- Decreased Head Trauma: Riders wearing airbag vests reduce their likelihood of sustaining head injuries by nearly eighty percent.

These figures highlight the potential of airbag vests to transform motorcycle safety, offering riders an additional layer of protection beyond traditional gear. A screenshot from a video of Lt Col Heidi Stallings, Air Force Safety Center, and Mr. Dave Brandt demonstrating how quickly a motorcycle airbag vest inflates when the ball-bearing rip cord is activated. The airbag vest has been proven to assist with blunt force trauma if ejected from a motorcycle.

> Video by MSgt Lisa Gonzales, Air Force Safety Center

EVOLUTION OF AIRBAG TECHNOLOGY IN MOTORCYCLING

The concept of wearable airbags originated in the equestrian world, protecting those who ride horses. In the early 2000s, this technology was adapted for Grand Prix motorcycle racers and has since become commercially available for everyday motorcyclists. This evolution signifies a broader commitment to rider safety and the continuous advancement of protective gear.

TYPES OF AIRBAG VESTS: TETHERED VS. WIRELESS

Motorcycle airbag vests primarily come in two styles: tethered and wireless (electronic). Each system offers unique features tailored to different rider preferences and needs, with its own set of advantages and considerations.

Tethered Airbag Vests

Tethered airbag vests operate through a physical connection between the

¹ National Highway Traffic Safety Administration. n.d. "Motorcycle Safety." https://www.nhtsa.gov/ road-safety/motorcycles.

² Johnson & Gilbert, P.A. n.d. "Will an Airbag Jacket or Vest Keep Me Safe While Motorcycling?" https://www.mylegalneeds.com/ faqs/do-airbag-jackets-keep-motorcyclists-safer. cfm#:-:text=Statistics%20indicate%20that%20 forward%20momentum,reduced%20by%20 approximately%2080%20percent.

airbag vest and the motorcycle. A cord links the two, and upon separation such as when the rider wearing the vest is ejected—the tension triggers the airbag's deployment.

Pros:

- Simplicity and Reliability: Essentially, riders fix the cord to the bike, and if they fall off, the airbag activates. This well-refined technology has been around the longest, confirming consistent performance.
- Cost-Effective: Generally more affordable than their electronic counterparts, tethered airbag vests are more accessible to a broader range of riders. Tethered vests do not require batteries and can be recharged by the rider at a low cost.
- User-Friendly: Typically, tethered airbag vests are ideal for off-road riders where falls occur more often, reducing inadvertent deployment.

Cons:

- Activation Requires Separation: Tethered airbags deploy only when the rider separates from the motorcycle, potentially leaving riders unprotected in certain accident scenarios.
- Manual Connection Needed: Riders must remember to connect the tether before each ride; failure to disconnect can lead to accidental deployments.

Wireless (Electronic) Airbag Vests

Wireless airbag vests utilize advanced sensors and algorithms to detect crashes, eliminating the need for a physical connection or tether to a motorcycle. These systems monitor the rider's movements in real-time to determine when to deploy the airbag.

Pros:

 Rapid Response: Advanced sensors (gyros, accelerometers, GPS, etc.) As the saying goes, it is better to have it and not need it than to need it and not have it. Protecting your life is priceless.

detect impacts and deploy the airbag in milliseconds. A small computer monitors the rider's condition up to one thousand times per second.

 No Physical Connection: Advanced sensors eliminate the need for riders to worry about connecting or disconnecting tethers.

Cons:

- Higher Costs: Wireless technology makes these vests more expensive upfront and may require higher maintenance costs than tethered devices. Some vests require a subscription to wear.
- Maintenance Requirements: Wireless technology requires regular recharging and cannot be recharged at home without certification. Post-deployment service (inspection by technicians) may be required.
- Potential Limitations: Algorithmbased systems for wireless vests may only be compatible with a limited range of jackets, depending on the manufacturer's design.

Many airbag vests are worn over standard motorcycle jackets, eliminating the need for new gear. However, some electronic systems only integrate into specific vests. Riders should ensure compatibility with their existing equipment when choosing a vest.

REAL-WORLD EFFECTIVENESS AT VARIOUS SPEEDS

Airbag vests tests have been conducted by riders on various surfaces, resulting in minor bruises instead of severe injuries. Although no gear guarantees complete protection, airbag vests primarily shield the collarbones, vital organs, ribs, back, and neck.

Moreover, the effectiveness of airbag vests varies based on impact scenarios. Studies suggest that airbag vests offer limited protection at certain speeds at which an object strikes another. For instance, vests are particularly effective at impact speeds between thirty to forty kilometers/hour, although effectiveness can vary with different impact configurations.³ However, even at higher speeds, any reduction in injury severity can be crucial.

FINAL THOUGHTS

Both tethered and wireless airbag vests offer significant safety benefits; the choice boils down to budget and preference. Nonetheless, the cost of an ambulance ride, hospitalization, and rehabilitation can far exceed the price of any vest. Like any other personal protective equipment (PPE), an airbag vest only works if worn. As the saying goes, it is better to have it and not need it than to need it and not have it. Protecting your life is priceless.

Investing in PPE enhances personal safety and contributes to a broader culture of responsibility and awareness in the motorcycling community. As technology continues to evolve, airbag vests are poised to become an integral piece of motorcycle equipment, offering riders even more safety and lowering the chances of injury and death.

³ International Research Council on Biomechanics of Injury. 2019. "Airbag Jacket for Motorcyclists: Evaluation of Real Effectiveness. https://www.ircobi.org/ wordpress/downloads/irc19/pdf-files/76.pdf?utm_ source=chatgpt.com.



Water Safety When Traveling Abroad

BY MS. RORY MERRITT, STAFF WRITER

Substituting with the parts of the world may be vastly different from what you are accustomed to when it comes to staying safe in and around water.

According to the U.S. Centers for Disease Control, drowning accounts for one out of ten deaths among Americans abroad. Drowning is the leading cause of death of American travelers visiting countries where water-related activities, such as swimming, diving, surfing, and boating, are popular. Drowning deaths are particularly common in developing countries, where emergency and rescue services may not be readily available.

In addition, contaminated water can cause serious illness when ingested. Drinking contaminated water or using it for cooking, washing food, making ice, or brushing teeth can cause diarrhea, vomiting, and stomach pain.

For these reasons, it is imperative to remain on guard and keep water safety in mind. Drinking bottled water is highly recommended, and use experienced local guides when boating, scuba diving, or participating in other water-related activities. Experts also advise checking your international insurance to see which activities are covered.

The following tips can ensure that you and your fellow travelers have a safe, healthy trip.



SWIMMING

Avoid swimming alone, wear a life jacket, and

develop a safety plan with fellow swimming companions. Always keep a particularly close eye on children because drowning is a leading cause of death for kids ages one to fourteen.

Remember that unfamiliar waters may be rife with rip currents, channelized currents of water at surf beaches that can drag swimmers away from shore. Foreign ocean and river currents can be dangerous and hard to recognize by Americans from non-coastal areas, and the beaches may have no lifeguards or signs warning of dangers.

Furthermore, be sure to avoid swallowing water when swimming; it could be contaminated with harmful bacteria or chemicals.



DIVING

Never dive head-first in unfamiliar areas! You never know what could be lurking just beneath the surface, including rock formations and fallen

trees that could cause catastrophic injuries.



ALCOHOL AND OTHER SUBSTANCES

Refrain from consuming alcohol and other substances before (or during) water-related activities. Among adolescents and adults, alcohol use is involved in up to seventy percent of water-related deaths.



SEA CREATURES

Do your research! Ask about local sea animals-such as sharks, jellyfish, sea snakes, coral, Portuguese men o' war, barracuda, eels, flower urchins, and

crocodiles-and avoid areas where you might accidentally come face-to-face with one (or many!) of these creatures. A sting or bite from a sea creature could be fatal.



RIP CURRENTS

Remember that unfamiliar waters may be rife with rip currents, channelized currents of water at surf beaches that can drag swimmers away from shore. Foreign ocean and river currents can be dangerous and hard to recognize by Americans from non-coastal areas, and the beaches may have no lifeguards or signs warning of dangers. Also, in locations that experience heavy seasonal rains, currents can rapidly change in strength and speed.

DRINKING WATER

Water contaminated with germs or chemicals can make you sick and ruin your trip. Although staying hydrated is important, particularly in hot climates, keep in mind that many parts of the world do not have tap water that is safe for ingesting. Be prepared to drink, wash your food, make ice, and cook with factory-sealed bottled or canned water. In addition, brush your teeth with bottled or disinfected water, and avoid swallowing water when showering. If bottled or canned water is unavailable, tap water can be disinfected by boiling, filtering, or chemically treating it.

Remember: staying safe and healthy is key to a happy trip! Do your research before you go to make sure that you and your companions are prepared. 🧶



Motorcycle Culture— Fun and Safety on Two Wheels

s we head into summer. Airmen, Sailors, Soldiers, and Marines around Joint Base Charleston, SC, are already eyeing their calendars in anticipation of the warmer weather to come so they can get back to enjoying motorcycle riding; other, more stalwart personnel have not stopped. Moreover, other personnel may be eager to participate in the upcoming riding season but are rather intimidated by the perceived labyrinth of requirements that seem to obstruct their path to riding. Air Force military members must meet certain requirements before riding a street motorcycle. These requirements are laid out in Department of the

Air Force Instruction 91-207, *The Traffic Safety Program*. Your major command or installation may include additional requirements.

I was recently asked several questions regarding the requirements for both the state and the Air Force. Requirements at the state level vary depending on the state where you are stationed. For instance, if you were ever stationed in California, you would have been allowed to "lane-split" (ride between lanes of slowed or stopped traffic moving in the same direction), but many states' laws prohibit this practice. I would advise you to look on your state's

BY MR. ADAM TWIGG, OCCUPATIONAL SAFETY, 628TH AIR BASE WING

Department of Motor Vehicles website to learn the specific requirements for your area. South Carolina state laws differ in a couple of ways from the standards put forth by the Air Force and Department of Defense (DoD). For example, South Carolina law dictates that you must wear a helmet and eye protection only if you are under the age of twenty-one. The Air Force and DoD, however, require helmets, eye protection, sturdy over-the-ankle foot protection, and protective clothing, such as a long-sleeved shirt or jacket, long pants, and full-fingered gloves for all riders, regardless of age. These Air Force and DoD requirements supersede state requirements and

The Air Force and DoD require helmets, eye protection, sturdy overthe-ankle foot protection, and protective clothing, such as a long-sleeved shirt or jacket, long pants, and full-fingered gloves for all riders, regardless of age.



must be adhered to by active duty or reserve riders whether they ride on or off base. Another example is that South Carolina does not require motorcycle safety training to operate a motorcycle unless riders have failed the riding portion of their license test three times; the Air Force and DoD require two types of training. This training requirement applies to active duty and reserve riders, but not to civilians riding on base unless their job requires them to operate a motorcycle.

The Air Force is committed to reducing the risks inherent to riding a motorcycle. Therefore, in addition to the legal requirements of having a valid motorcycle license, endorsement, or learner's permit, military members operating a motorcycle with an engine size of fifty cubic centimeters or greater are required to attend specific training and briefings. To assist riders with understanding and meeting these requirements, I would propose that any personnel interested in operating a motorcycle first check in with the Motorcycle Safety Representative (MSR) for their squadron. The MSR will prompt them to create an account in the Air Force Safety Automated System so they can be tracked in the Motorcycle Unit Safety Tracking Tool (MUSTT) module. MUSTT is used to document the rider's training and briefing requirements, as well as specific rider information, such as whether they are licensed and what kind of motorcycle they operate. Two kinds of briefings are required for the rider. The first is the initial motorcycle safety briefing, which must be completed within thirty days of a new rider checking into the command or within thirty days of becoming a new rider. I suggest that this

briefing be completed with the Squadron Commander, MSR, and the rider so that all parties are aware of the service member's riding status and what the expectations are to foster a partnership and a commitment to safe riding. The second briefing requirement is the annual/preseason briefing. This briefing highlights expectations, trends, policy changes, local riding conditions, and risk management.

The training requirement is a multifaceted process. Prospective riders must first obtain a motorcycle permit or already have a motorcycle endorsement on their license to enroll in any Air Force-sponsored training. The first training requirement is the Level I, or Basic Rider Course (BRC). The Air Force credits Level I training to those personnel with a motorcycle endorsement on their license; however, I strongly encourage them to take a BRC, if for nothing more than a refresher. The second training requirement is the Level II, or Basic Rider Course 2 (BRC2)/Advanced Rider Course (ARC). Riders should take the ARC if they intend to ride a sport bike. Level II training should be provided within sixty days of the request for training but no more than a year after completion of Level I training. Level III training, or sustainment training, is required every five years thereafter. Sustainment training is any training that meets or exceeds the requirements for Level II training. Prospective riders should work with their MSR to enroll in training. As stated earlier, these briefings and training requirements are required for all active duty and reserve riders, whether they are riding on or off base. By taking these measures to reduce risk, we can all plan to have a safe summer. 🧶

The Importance of Smoke and Carbon Monoxide Detectors in Your Home

BY MS. KATHY ALWARD, STAFF WRITER

nstalling smoke and carbon monoxide (CO) detectors is an important step toward ensuring a safe home. According to Consumer *Reports*, both are inexpensive, easy to install, and can save lives. Whereas smoke alarms can notify residents of a fire, CO alarms are just as important because CO, a poisonous gas that is colorless and odorless, cannot be perceived except by a CO detector. CO poisoning incidents can occur when equipment, appliances, or vehicles are improperly used or vented. According to the U.S. Fire Administration, an estimated 150 people die yearly from accidental CO poisoning.

Although most homeowners know that having a smoke alarm is important, according to a report by the National Fire Protection Association, almost three out of every five fire fatalities from 2014 to 2018 happened in a home with no fire alarms or when fire alarms failed to operate.

Properly installing and maintaining your home smoke alarms is important, and the Consumer Product Safety Commission recommends a working smoke alarm on every floor of your home and, preferably, in every bedroom. Further smoke alarm safety suggestions from the Consumer Product Safety Commission include the following:

- Test your smoke alarms monthly.
- Replace smoke alarm batteries annually.

- Consider using an interconnected smoke alarm because if one of them detects smoke, the other alarms will also sound.
- Develop a family fire escape plan and practice your plan twice a year with all family members.
- Never go back inside your home if a fire occurs inside. Get out, stay out, and call for help!

According to the U.S. Fire Administration, you should contact your local fire marshal to confirm whether your city, county, or state requires a specific type of fire alarm. Also, call your local fire department's non-emergency phone number to ask about reduced-price or free smoke alarms. You can also check with your insurance company to see if they offer a discount on your home insurance if you have smoke detectors. The U.S. Fire Administration lists several types of smoke alarms that are available and their starting prices as follows:

- Ionization and photoelectric: six dollars
- Dual sensor: twenty-four dollars
- Smoke alarms with a microprocessor that ensures fewer false alarms and are faster to alert: thirty dollars
- Wireless/radio frequency that communicates without wires: forty dollars

The Consumer Product Safety Commission (CPSC) recommends installing CO detectors on each level of the home and outside sleeping areas and testing the batteries each month. The symptoms of CO poisoning may include the following:

- Mental confusion
- Nausea
- Shortness of breath
- Fatigue
- Vomiting
- Headache
- Loss of muscular coordination
- Loss of consciousness
- Death

Portable generators, charcoal grills, or camp stoves should never be used inside the home, according to the CPSC, and generators should be at least twenty feet away from your home, with the exhaust facing away from the house. If you smell gas, you should get out of the house and call 911, and do not turn lights on or off or use electrical equipment or phones. The CPSC also suggests using batteryoperated lanterns or flashlights instead of candles if you have a house fire and the lights are out.

Consumer Reports states that it rigorously tests each CO and smoke detector that enters its labs. The tests assess the detectors' response to both flaming fires and smoky, smoldering fires. Although, in the past, smoke detectors generally could not detect both, many detectors are now equipped with multiple sensors. For combination detectors, Consumer Reports also assesses low CO levels (one hundred parts per million [ppm]), high CO levels (four hundred ppm), and the accuracy of CO measurements of digital displays or audio announcements.

Consumer Reports suggests using a combination of smoke and CO detectors for complete protection in the home. Some home security systems can incorporate smoke and CO detectors and sound an alarm both inside and outside the house, triggering the security system when detectors go off and notifying the police, fire department, or the resident's cell phone.

Because fires burn differently, different types of smoke detectors are available. An ionization smoke detector works best for detecting the small particles from fast, flaming fires. It is not as effective in detecting smoldering, smoky fires and often can cause false alarms, especially if it is mounted near a kitchen or bathroom. Photoelectric smoke detectors are better to use near kitchens because they are not prone to false alarms caused by burnt food, and they best detect smoky, smoldering fires but are not as good at detecting fast, flaming fires. Dual-sensor smoke detectors combine photoelectric technology and ionization to detect both smoldering and flaming fires.

CO detectors use sensors to detect the presence of CO in the home; however, they do not detect explosive gases—such as methane, propane, and natural gas—or smoke. Combination smoke and CO detectors are available in conventional (not internet-connected) and smart models that can be used with a companion smartphone app.

Homes with smoke and CO detectors are much safer, so installing both is highly recommended. To help you choose the best smoke and CO detectors to purchase for your home, review the ratings provided by *Consumer Reports.*¹ A little research can go a long way to ensure the safety of your home for yourself and your family.

Homes with smoke and carbon monoxide detectors are much safer, so installing both is highly recommended.



INSTALL smoke alarms and CO detectors on every level of your home and within ten feet of all sleeping areas.



TEST smoke alarms and CO detectors at least once per month and change the batteries annually.



REPLACE smoke alarms and CO detectors when they are ten years old.



DO NOT DELAY, ESCAPE

Smoke alarms and CO detectors are an early warning system to get you and your family out of harm's way, not for you to grab personal items.

¹ Consumer Reports. 2025. Smoke & Carbon Monoxide Detectors. https:// www.consumerreports.org/home-garden/smoke-carbon-monoxide-detectors/

Coping With Heat Waves and Wildfires

BY MS. TIFFANY L. TOLBERT, STAFF WRITER

ccording to the U.S. Global Change Research Program, heat waves are occurring more often than before—increasing from more than two heat waves per year during the 1960s to more than six per year during the 2020s. Heat waves, or extreme heat events, are unusually high temperatures for an extended period that can cause illnesses, such as heat exhaustion and heat stroke, especially among vulnerable groups, including children, older adults, those who are pregnant, and those with pre-existing medical conditions. Increasing extreme heat events can lead to heat-related illnesses and deaths, particularly among those unprepared.

PREPARING FOR HEAT WAVES

Preparation is key to reducing the impact of heat waves. Protect yourself and your loved ones with mitigating measures. For example:

- Drink water and consume easy-todigest foods like fruits and salads (they are rich in water content and can provide nutrients. They also help you stay cool and energized).
- Wear loose, lightweight, and lightcolored clothing to help reflect heat.
- Avoid going outside during peak heat hours or minimize strenuous outdoor activities like exercise.
- Avoid direct sun exposure because sunburn reduces the body's ability to cool down.
- Stay cool in air-conditioned environments like shopping malls, libraries, or homes.
- Take cool showers or baths to help lower body temperature.
- Check on at-risk individuals to ensure they are staying cool and are safe.

 Do not leave children, pets, or electronics in parked vehicles.

Extremely high temperatures are a common cause of heat illnesses and wildfires. High temperatures, for example, can dry out trees, shrubs, and grasses, creating conditions advantageous for fires to ignite and quickly spread. Wildfires are typically categorized as unplanned and unpredictable fires in areas of combustible vegetation (such as forests) and are extremely dangerous, often uncontrollable, and can worsen air quality (impacting a person's respiratory and cardiovascular systems), and destroy wildlife, natural areas, homes, and communities.

This destructive scenario was the case with the series of wildfires that erupted on Jan. 7, 2025, and roared across Southern California. Believed by officials to be fueled by a combination of extreme weather, powerful winds, and drought-like conditions, the



Create an emergency evacuation plan that pinpoints exactly how everyone, including pets, should safely exit the home.

wildfires caused at least twenty-seven deaths; destroyed more than twelve thousand structures, including houses and mobile homes, schools, libraries, and vehicles; and contributed to an untold amount of injuries to residents and first responders. When measured by the number of buildings destroyed, these recent wildfires are among the most destructive in Los Angeles history.

PREPARING FOR WILDFIRES

As with heat waves, preventative measures are available to help mitigate wildfire risks, injuries, and deaths. For example:

- Remain aware of evacuation orders and air quality updates from local news sources and authorities.
- Establish a designated room that can be sealed off from outside air, using a portable air cleaner to maintain indoor air quality.

- Create an emergency evacuation plan that pinpoints exactly how everyone, including pets, should safely exit the home.
- Review and update important documents, such as insurance documents and passports, and store physical and digital copies securely.
- Maintain a clear zone around the property by removing leaves, debris, and flammable items and using fire-resistant materials.
- Prepare an emergency supply kit with first aid and other safety items like face masks.
- Keep mobile devices, portable batteries, and power sources charged.

Moreover, follow local instructions for returning home after a wildfire to avoid hazards like hot ash and unstable structures. During cleanup, wet down debris to reduce particles in the air; wear a respirator to minimize dust inhalation; and wear protective clothing, including long sleeves, pants, and gloves. Remember to take pictures of any property damage and contact your insurance provider for assistance. Lastly, to help lessen the mental toll of experiencing a profoundly disruptive situation, seek support—whether in the form of formal therapy, talking with family or friends, or talking with a group of people who have lived through a similar experience.

Both heat waves and wildfires require awareness and preparation to ensure safety and minimize damage and deaths. By taking precautionary steps, the likelihood of reacting effectively to these weather-related challenges increases while the likelihood of experiencing injuries and any other negative consequences decreases.

Wilderness Safety: Identifying and Treating Venomous Animal Bites

BY MR. ANDREW HELLERSTEIN, STAFF WRITER

Re you afraid of snake bites? That fear is perfectly normal. Snakes cause more than eight thousand deaths in the United States and more than 100,000 deaths around the world every year. Spiders and other bugs can also injure people with their bites and stings, and even kill people in rare cases, but that is no reason to stay indoors. There are many ways to treat venomous wounds, ranging from powerful antivenoms to basic at-home treatments. If you find yourself on the receiving end of a nasty bite or sting, take the following advice:

First, call 911. If you have been bitten by a venomous animal, you should immediately call for medical assistance. Even nonlethal venoms can trigger a serious allergic reaction, and bites from certain species are extremely dangerous and must be treated as soon as possible. Some venoms are slow-acting and will not cause immediate symptoms, so do not assume that you are in the clear just because you feel fine.

Second, identify the animal that bit you. If you are bitten by a venomous animal, try to identify its species. If an antivenom is deemed necessary, your medical responder will need to know the animal that bit you to select the correct treatment. Write down details you see on the animal's body or take a picture of the animal with your cellphone, if possible.

SNAKES

Common North American venomous snakes include the following three examples:

 Rattlesnakes — Rattlesnakes are known for the rattles at the end of their tails, which are used to make a distinctive sound when threatened. Rattlesnake bite symptoms include numbness, nausea, weakness, and breathing difficulties.



Copperheads — Copperheads have a copper-red head and distinctive, hourglass-shaped marks along their bodies. Their venom can cause swelling, bruising, and blistering near the bite wound, and severe pain. Other symptoms of a copperhead bite include vomiting, numbness around the face and limbs, and breathing difficulties.



 Cottonmouths (water moccasins) — Cottonmouths or water moccasins show their bright white mouth when threatened. The symptoms of a cottonmouth bite are similar to other snakebites and include severe pain and swelling, numbness, and difficulty breathing. The bite can also cause skin discoloration.



Treat a snakebite by following these steps:

- 1. Call 911, then wash the bite with soap and water.
- 2. Keep the bitten area still and lower than the heart.
- Remove all rings, watches, and constrictive clothing around the affected area in case of swelling.
- Cover the area with a clean, cool compress or a moist dressing to ease swelling and discomfort.
- 5. Monitor breathing and heart rate.
- Keep track of when the bite happened so that you can tell emergency staff if needed.
- 7. Draw a circle around the affected area and mark the time of the bite and initial reaction. Redraw the circle around the site of injury at a later time to mark the progression over time.
- 8. Tell emergency staff what the snake looked like, its size, and the type of snake, if known.
- Do not apply a tourniquet or try to suck the venom out of a snakebite. Real-life snakebite situations are not like those in a Hollywood movie.

Bug bites, including black widow spider bites and brown recluse spider bites, are rarely fatal. However, you should see a doctor immediately if you have been bitten by one of these spiders or if you are unsure if the bite was from a dangerous spider.

SPIDERS AND BUGS

Common North American deadly insects include the following three examples:

 Black widow spiders — Black widow spiders can be identified by the infamous red hourglass marking on their abdomen. Black widow spider bite symptoms include pain and swelling, severe cramping, and vomiting.



Brown recluse spiders — Brown recluse spiders can grow to the size of a penny and can be identified by the dark, violin-shaped marks on their thorax and their three pairs of eyes. Spider bite symptoms can start with mild pain and progress to fevers, chills, and body aches. A deep blue or purple area with a red ring may develop around the bite location.



 Arizona bark scorpions — Arizona bark scorpions are light brown and live in the Sonoran Desert of the Southern United States and Mexico. Scorpion stings can cause serious pain, breathing difficulties, and muscle spasms.



Bug bites, including black widow spider bites and brown recluse spider bites, are rarely fatal. However, you should see a doctor immediately if you have been bitten by one of these spiders or if you are unsure if the bite was from a dangerous spider. Scorpions and other bugs have venomous stings, but they rarely cause life-threatening injuries. If you develop severe pain or trouble breathing following any kind of bug bite or sting, call a doctor immediately.

Treat a bug bite or sting by following these three steps:

1. Clean the wound with soap and water.

- 2. Apply a cool compress to the bite for fifteen minutes every hour and lift the wounded area if you can.
- 3. Take over-the-counter medications for pain, such as ibuprofen, or antihistamines, such as Benadryl, to help alleviate itching symptoms.

PREVENTION

To avoid getting bitten, follow these three tips:

- Be cautious in areas where snakes and spiders may lurk. Snakes and spiders can hide in tall grass and brush. Try using a stick to spread the grass in front of you to reveal potential threats. Spiders may also hide in boots, hats, and other pieces of clothing and will attack when the clothing is put on.
- 2. Wear safe clothing like thick boots, baggy, long pants, and long sleeves to stop a bite or sting from penetrating through your skin.
- 3. Do not pick up or touch a venomous animal. They generally only attack if they feel threatened, so leave them alone.

Venomous animals are certainly scary, but with the information provided, you can be ready for any of their bites or stings. If you stay aware and take reasonable precautions, you will have little to fear from these infamous critters.

Recreational Therapy for Servicemembers, Veterans Enhances Quality of Life

BY MS. MICHELLE PIEHL, STAFF WRITER

hen servicemembers experience illness or injury, it can lead to a wide array of thoughts, feelings, and experiences. Some even experience a sense of loss of community or purpose. The evidencebased concept of recreation therapy has led to gains for servicemembers and veterans in helping restore quality of life.

As the first national healthcare system to establish a recreation therapy program, originally established under the Rehabilitation Medicine Service Office, the Veterans Health Administration helps veterans and servicemembers connect to various programs, such as creative arts, adaptive sports, outdoor recreation, animal-assisted, and fitness and wellness therapies. Now a standalone service within the U.S. Department of Veterans Affairs (VA), recreation therapy uses a multidisciplinary approach to maintaining health and wellness for veterans with injuries, chronic illness, or disabling conditions, allowing them to stay engaged with their families and communities.

The American Therapeutic Recreation Association defines *recreational therapists* as "healthcare providers who plan, direct, deliver, and evaluate recreation-based interventions for individuals with illnesses and/or disabling conditions. They provide research-informed interventions that are based on client assessments and targeted client outcomes."¹

Relaxation techniques, animal visits, adaptive sports, aquatic therapy, comfort-based activities, and drama, art, dance, and music therapy programs help equip servicemembers to manage the difficulties associated with various physical and mental conditions. These programs offer numerous ways for veterans to connect with thoughts, feelings, experiences, and other socioemotional domains.

Adaptive sports provide community, connection, and independence to enhance the quality of life for servicemembers and veterans. The Department of Defense (DoD) Warrior Games is an adaptive sports competition for wounded, ill, and injured active duty servicemembers and veterans.



"The adaptive sports featured in the DoD Warrior Games are a part of the larger DoD Warrior Care program. Within this program, adaptive sports provide reconditioning activities and competitive athletic opportunities to all wounded, ill, and injured service members to improve their physical and mental wellness throughout the continuum of recovery and transition. Modified equipment and additional classification systems allow each athlete to compete, regardless of their injury or illness," states the DoD Warrior Games website.²

VA offers several programs, including the National Veterans Wheelchair Games, National Disabled Veterans Golf Clinic, National Veterans Golden Age Games, National Veterans Creative Arts Festival, National Disabled Veterans Winter and Summer Sports Clinics, Adaptive Sports Grant Program, and monthly training allowance for veterans who are Paralympic or Olympic sport athletes.

"The capacity to enjoy life and to maintain self-esteem is vital to the wellbeing of an individual particularly when recovery or adjustment is involved. Based on a core knowledge of human behavior and physiology, the goal of recreation therapy and the creative arts therapies is to creatively develop an individual's potential for selfsufficiency, enrichment, and fulfillment," states VA.³

² United States Marine Corps. 2024. 2024 Department of Defense (DoD) Warrior Games. https://www.woundedwarrior.marines.mil/2024WG/.

³ U.S. Department of Veterans Affairs. n.d. "Why Creative Arts Therapy?" https://www.rehab.va.gov/PROSTHETICS/rectherapy/Why_Creative_Arts_ Therapy.asp.

¹ ATRA. n.d. "Who We Are." https://www.atra-online.com/who-we-are.



Dealing With the Unexpected Crisis

BY MR. KEVIN SLUSS, CSP AMC RISK MANAGEMENT PROCESS MANAGER

A s I write this article in January, I see a foot of snow on the ground in the St. Louis area. Among other hazards, snow on the road leads to traffic events, as my wife recently experienced. Despite all of her preparations, another driver ran a red light and ran into the vehicle she was driving. Thankfully, her injuries were minor, but now we are experiencing all the joys of dealing with tow trucks, insurance, and rental cars. As we reviewed the situation in the context of Integrating Risk and Readiness, some thoughts came to mind. She was going to a dental appointment that could have been postponed. Perhaps postponing the appointment would have resulted in someone else being in this situation. I did postpone an appointment the following week during the second wave of snow.

In Air Mobility Command (AMC), we see too many off-duty fatalities, roughly one-half with four-wheel vehicles and one-half with motorcycles. A common debrief statement I have heard after motorcycle events is, "The rider did everything right; they had the right training and the right protective gear, but they just weren't seen by the other vehicle." It occurred to me that we often go about our lives as prepared as we can be, but we neglect to factor in other drivers' situations and their potential lack of preparation or attention. At AMC, we are moving to what we call the next phase of Integrating Risk and Readiness. However, sometimes we must set aside lofty plans and review our immediate situation and tasks to minimize losses and thus retain capabilities—not just for our mission but for all aspects of life.



A DAY IN THE LIFE



Airmen assigned to the 515th Air Mobility Operations Wing participate in a challenge during the Air Mobility Team (AMT) Rodeo at Joint Base Pearl Harbor-Hickam, HI, Feb. 27, 2025. The AMT Rodeo is intentionally designed to exercise team dynamics and challenge members across Command and Control, Aerial Port, and Maintenance operations.

Courtesy photo