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KNOWLEDGE

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OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

FROM THE **COVER**

WHERE THE RAIL MEETS THE ROAD 4

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Mission Statement:
The Army Safety Team provides the Army with safety and risk management expertise to preserve readiness through the prevention of accidental loss of our Soldiers, Civilians, Families and vital resources.

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WHERE THE RAIL MEETS THE ROAD

HOWARD J. MAYHEW
U.S. Army Transportation Corps Regimental Safety Office
Fort Lee, Virginia

Will you be crossing a railroad track today? If so, your life could be in danger.

There are thousands of railroad crossings dotting the more than 160,000 miles of track in the U.S. If you encounter a train inside a railroad crossing, the train will always win. A locomotive weighs 200 or more tons, and that's not counting the freight cars attached. To make a comparison, a freight train hitting your vehicle is like your car hitting a soda can, but with one big difference — you're inside!

Think this is a rare occurrence? Think again. Every three hours, a person or vehicle is struck by a train. For example, in 2010, more than 800 people were injured and 260 were killed in 2,004 railroad crossing accidents. More often than not, these collisions occurred when drivers maneuvered around the gates at activated railroad crossings, not realizing an approaching train was less than 20 seconds away.

Fortunately, you don't have to join that statistics column. Shown below are some simple tips to keep motorists safe where the rail meets the road.

- Trains and cars don't mix. Never race a train to the crossing; even if you tie, you lose.
- Flashing red lights indicate a train is approaching from either direction. You can be fined for failure to obey these signals. Never walk around or behind lowered gates at a crossing, and do not cross the tracks until the lights have stopped flashing and it's safe to do so.
- The train you see is closer and moving faster than you think. If you see a train approaching, wait for it to go by before you proceed across the tracks.
- Be aware that trains cannot stop quickly. Even if the locomotive engineer sees you, a freight train moving at 55 mph can take a mile or more to stop once the emergency brakes are applied. That's the equivalent of 18 football fields.
- Never drive around lowered gates; it's illegal and deadly. If you suspect a signal is malfunctioning, call the 1-800 number posted on or near the crossing signal or a local law enforcement agency.
- Don't get trapped on the tracks. Proceed through a highway rail grade crossing only if you are sure you can completely clear the crossing without stopping. Remember, the train is 3 feet wider than the tracks on both sides.
- If your vehicle ever stalls on a track with a train coming, get out immediately and move quickly away from the tracks and back toward the direction from which the train is coming. If you run in the same direction the train is traveling, when it hits your car, you could be injured by flying debris. Call local law enforcement for assistance.

• At a multiple track crossing waiting for a train to pass, watch out for a second train on the other tracks. That train could be approaching from either direction.

• When you need to cross train tracks, go to a designated crossing, look both ways and cross the tracks quickly without stopping. Remember, it isn't safe to stop closer than 15 feet from a rail.

• Always expect a train. Freight trains do not follow set schedules.

Rail safety is for everyone, not just drivers. Pedestrians and others who choose to walk or play around railroad tracks are at extreme risk of being struck by a train. When I was a child, I used to put coins on the tracks and watch the train flatten them. If I only knew then what I know now. Trains do not make the loud "click, clack" noise as in the past. Modern-day trains are much quieter. Trespassers who get hit by trains are usually involved in other activities such as riding all-terrain vehicles or motocross bikes, walking down the center of the track while wearing earbuds or conducting physical training.

Pedestrians should keep the following tips in mind when near railroad tracks:

• Railroad tracks, trestles, yards and equipment are private property. If you are in a rail yard uninvited by a railroad official, you are trespassing and subject to criminal prosecution. You could be accidentally injured or killed in a busy rail yard.

• Trains overhang the tracks by at least 3 feet in both directions and loose straps hanging from rail cars may extend even further. If you are in the right-of-way next to the tracks, you can be hit by the train.

• Do not hunt, fish or bungee jump from railroad trestles. There is only enough clearance on the tracks for a train to pass. Trestles are not meant to be sidewalks or pedestrian bridges. Never walk, run, cycle or operate ATVs on railroad tracks, rights-of-way or through tunnels.

• Do not attempt to hop aboard railroad equipment at any time. A slip of the foot can cost you a limb or your life.

• Be aware trains do not follow set schedules. Any time is train time! ■

Author's note: Let's cut to the chase: No one has ever been shot with an unloaded gun. A bang is always conclusive proof that a gun was loaded. Firearms are discharged in one of only two ways: intentionally or negligently. Once the bang happens, it's out of your control. This article is about how to control your firearm.

I have a muzzle magnet. As best as I can tell, it's located just in front of my navel. Firearm muzzles just seem to swing mindlessly toward it whenever I'm in or near a group of shooters. When a shooter carelessly points a muzzle at me, I immediately say something and they usually get upset that I implied they handled their weapon unsafely. They defensively tell me that they know it's unloaded, they just checked it yesterday and ask, "Do you think I'd do something that stupid?" My retort is always, "Well, I don't know if it's unloaded and I don't care when you checked it. I control the muzzle of my firearm and expect the same from others!"

CONTROL YOUR MUZZLE

JAMES A. REDDICK
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Try this yourself. On the range, stay aware and notice how many other people point guns at you. Controlling the muzzle of your firearm is an "always" requirement, so it doesn't matter if it's on duty or off duty. A negligent discharge will result in the least damage when the muzzle is pointed in the safest direction possible. If you witness someone mishandling a weapon, speak up! And stay cool when someone reminds you to control your muzzle.

Guns fire when the trigger is pulled; triggers get pulled when fingers are on them. If you don't want your gun to fire, don't have your finger on the trigger. I intentionally keep my finger off the trigger when I don't want to fire it and so should you.

"The safety is on," is an excuse that covers the gamut of firearm handling sins. That excuse doesn't give me a warm, fuzzy feeling. To me, that is kind of like saying that you are driving drunk, but the cruise control is set for the speed limit. Remember, one sensible action doesn't negate the foolish ones. I don't really trust mechanical safeties. I use them religiously, though, because they work most of the time. What I trust is the "safety" between my ears and keeping the muzzle pointed in a safe direction.

Being somewhat of an oddball, I read directions. I know how to operate my firearms — how to disassemble them, clean them and reassemble them. I practice doing those things and I keep the muzzle pointed safely while doing so. When I get to the range or a hunting area, I know I can load and use my firearm safely. How many tries did it take you to figure out what that little metal tab did on your Benelli? Which of the umpteen different trigger systems does your SIG have? All of that handy information is in the instruction booklet.

My guns are unloaded when they're not in use. It's easy to load them when needed. Do you need guns loaded and ready in combat? Yes, indeed. How about when you're on the firing line at the range? Certainly. When the pistol is bouncing around under the seat of the pickup? When the shotgun is in the closet? When the rifle is next to the bed? You decide. You have to make that decision based upon your personal situation and the amount of risk you can accept. However, the jurors may have a different viewpoint. So will the cops, your spouse and mom. You need to practice loading quickly and safely so it becomes a skill you can count on.

There is no booze around when I'm shooting. This, too, is an always rule. Yes, beer is also booze. If you've had any alcohol, don't mess with your guns at all. If your friends have been drinking, discourage them from shooting or even handling their guns. Shoot completely sober, then put the guns away, relax and enjoy your beverage of choice.

Guns are expensive. Most of mine have custom work, optical sights and other accessories. I keep them locked in a safe, and I spin the dial every time I close it. Properly secured firearms are safer for, and from, everyone.

Some of you may want to carry a concealed handgun as I have done for more than 30 years. Concealed carry of firearms for self-protection is more prevalent today than ever; 49 of 50 states currently allow concealed carry in some manner. I offer this advice: Before you accept the risks and responsibilities that accrue with concealed carry, find a good defense lawyer, knowledgeable law enforcement officer and local prosecutor to discuss your responsibilities and the likely repercussions from actually using that firearm. If you choose to exercise those rights, you need to do so with full knowledge. Military installations do not allow concealed carry, so don't even think about it!

I've found that (for me) the best way to reinforce safe gun handling skills is to shoot. There are competitive events for almost every shooting interest. The United States Practical Shooting Association caters to action-oriented, very competitive people; International Defensive Pistol Association matches center around self-defense scenarios; Cowboy Action Shooting is mostly just for fun; and trap, skeet, sporting clays and formal rifle and pistol competitions stress pure marksmanship. These competitive events are open to everyone and emphasize safe gun handling, familiarity with your firearms and enjoying the shooting sports. Our Army marksmanship unit competes, and so can you. Newbies are always welcome. Get out there and make some noise. Safe shooting! ■

FYI

Negligent discharges occur on and off duty and can happen to anyone. Awareness of safety rules and compliance with appropriate procedures helps prevent accidents. When handling weapons on the range, in combat or off duty, personnel must be aware of and use proper procedures to avoid negligent discharges and other accidents. The Range and Weapons Safety Toolbox is a centralized collection of online resources for managing range operations and safe weapons handling. The toolbox hosts various references and materials including publications, training support packages, multimedia products, ammunition and explosives information, and safety messages and alerts. By using this toolbox, Soldiers and leaders can minimize risks and sustain combat readiness. Visit https://safety.army.mil/rangeweaponssafety (AKO log in required) for more information.

Place Ring in the

CHIEF WARRANT OFFICER 4 SHAMUS M. KIRSCHBAUM
A Company, 1st Battalion, 145th Aviation Regiment
Fort Rucker, Alabama

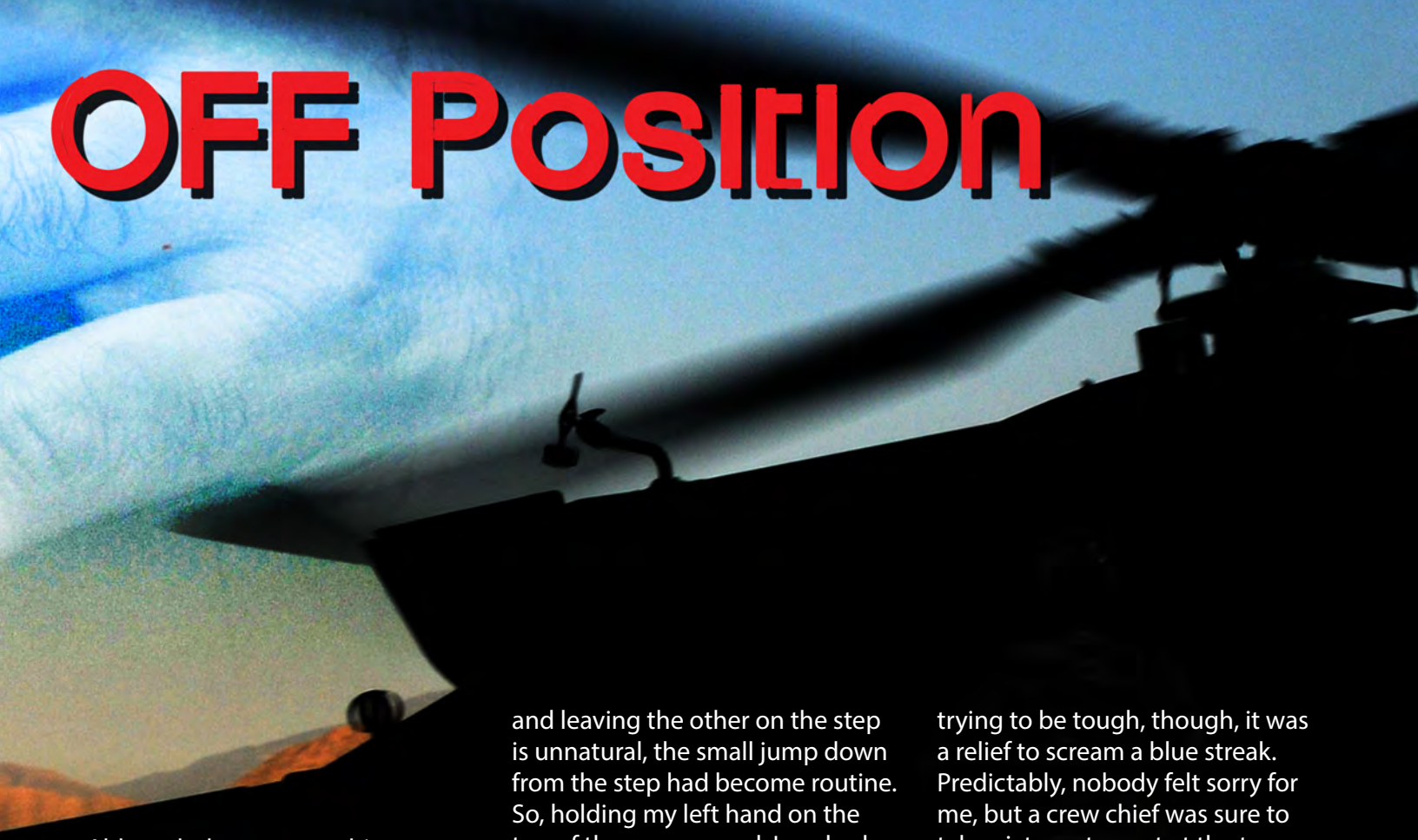
One of the most difficult safety precautions to convince Soldiers to buy in to is to remove jewelry before working around aircraft. Wedding bands, in particular, are not commonly removed because of personal convictions that we should wear the symbolic jewelry at all times. Nearly all Soldiers have seen the photographic evidence of the dangers of wearing rings, but they accept the risk either to avoid violating their personal beliefs or possibly due to threats from their spouses.

I was one of those Soldiers who knew and understood the risks associated with wearing my wedding band at work, but I chose to wear it anyway. I told myself nothing would happen to me because I was aware of the catch hazard and would operate with a heightened consciousness of the ring. I believed I would be able to reduce the risk by wearing my gloves during preflight operations and avoid jumping down from the aircraft. I was much more afraid of losing the ring or simply forgetting to put it back on after work and causing my wife to question why I wasn't wearing the very symbol of my fidelity and commitment to our marriage.

Of course, I would not be writing this article if I weren't personally involved in a ring accident. And let me tell you, it hurts! It happened to me while climbing out of the pilot side of a Black Hawk following a night vision goggle flight in Iraq. After a long night of flying in a combat zone, this was not the way I was expecting to finish my day.

I had about 700 flight hours at the time and, as far as I could remember, always climbed out of the aircraft the same way.

OFF Position



Although there was nothing out of the ordinary about the way I dismounted the helicopter, this was the time my ring finger became acquainted with the tiny screw that protrudes about two threads out from the top of the armor side panel. Unfortunately, my loosely enforced personal rule of not jumping off the aircraft did not always apply to getting out of my seat after a flight. I typically pushed myself out from the step and hopped out of the aircraft. Since I am somewhat short and lowering one foot to the ground and leaving the other on the step is unnatural, the small jump down from the step had become routine. So, holding my left hand on the top of the armor panel, I pushed off and jumped to the ground just a foot or two below. My ring caught on the screw and by the time my feet hit the ground, I was in an unexpected world of pain.

Initially, I tried to conceal my pain because I knew exactly how unsympathetic my crew would be. We had all seen the graphic photos and been warned about the risks of wearing wedding rings on the aircraft. Besides that, it is pretty tough to squeeze any sympathy for mistakes from aviators, in general. After a few moments of trying to be tough, though, it was a relief to scream a blue streak. Predictably, nobody felt sorry for me, but a crew chief was sure to take pictures to post at the troop medical clinic. Luckily, my ring came off my finger and my wounds were not serious; but I learned a valuable lesson through the pain of the accident and the shame of having to walk by the picture of my finger every time I visited the TMC.

"ONE POSITIVE OUTCOME OF THIS ACCIDENT WAS I GAINED A SOLID ARGUMENT TO CONVINCE MY WIFE THAT WEARING MY RING AT WORK WAS TOO DANGEROUS."

One positive outcome of this accident was I gained a solid argument to convince my wife that wearing my ring at work was too dangerous. So, now I share this story in hopes that you can make that argument before you have a similar accident. ■

Motorcycling is a lifelong learning process. Far too often riders think after a few years and a few thousand miles that they know it all. That concept can be fatal.

STAY AWAR STAY ALI

DRIVING DIVISION
U.S. Army Combat Readiness Center
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Permanent change of station moves happen often enough to be somewhat of a setback to a rider's learning curve. At that point, they need to be aware that what they have learned isn't lost — but they may need to modify their skills for the road conditions at their new duty station. The focus of that learning process is adjusting to the different road surfaces and climatic conditions. High-powered sport bikes are affected most and are the most common motorcycles among Soldiers.

Let's take a look at this situation pragmatically. Assume you are a rider in the Southeast. The climate is warm and tires tend to adhere to surfaces much better than in other areas of the country. Because roads don't freeze during the winter, their surfaces are also in better condition. Riders often get accustomed to a certain riding style after a few years, not realizing that may have to change at a new duty location. When those moves occur, they must understand how to ride in their new geographic location, not just fall back on what they've always done. However, getting adjusted requires both time and discipline on the rider's behalf.

That discipline includes learning

"WHILE RIDERS MAY BE FULLY CAPABLE OF NEGOTIATING ROAD CONDITIONS IN THE AREA WHERE THEY ARE ACCUSTOMED TO RIDING, A PCS CHANGES THE DYNAMICS OF THESE SURFACES."

to read road surfaces, as they may be constantly changing. While some surfaces — such as crowned roads — remain relatively similar throughout the country, the degree of crown may vary at different locations. Motorcycles tend to drift away from the direction of the crown. This condition is the same with an automobile, but is much more pronounced with a motorcycle. Two-lane highways are crowned to the centerline, while four-lane highways are crowned to the median. Sport bikes are affected by road crowns more than standard motorcycles or cruisers, so changing motorcycles or riding a borrowed bike can be a recipe for disaster.

Today, because of repairs, there are patches on most road surfaces. Some have raised surfaces, while others may be concave. Each patch causes a differing reaction and no two are alike. When crossed at highway speed, riders must be aware how their motorcycle will react. Crossed at excessive speed, these patches can change the rider's direction of travel. That's not a problem if the rider is reading the surface and knows what to do. But if the rider is daydreaming, or there are other factors such as cracks, tar snakes or weather, the result can be disastrous.

Painted lines, dribbled fuel or oil, railroad tracks, grates, covers, the color of the road surface (is the road blacktop or concrete?) and pavement grooves are other examples of potentially dangerous surfaces. Riders must read road conditions and react accordingly. Because of their sensitive handling, sport bikes react to changes in road surfaces faster than other types of motorcycles, which isn't necessarily a bad thing. Quickness is why most sport bike riders chose that type of motorcycle in the first place. This makes it important that all motorcyclists know their bike's characteristics, react accordingly and stay focused while riding.

While riders may be fully capable of negotiating road conditions in the area where they are accustomed to riding, a PCS changes the dynamics of these surfaces. Changing to a different type motorcycle or a more powerful version all contribute to the way a rider needs to read and react to road surfaces. Staying aware of the changing road conditions and showing the discipline to adjust to them is fundamental to safe riding. ■

KNOW THE SIGNS

RETIRED CHIEF WARRANT OFFICER ROBERT WOODHAM
Redstone Arsenal, Alabama

With traumatic injuries, such as those seen in combat or vehicle accidents, it's hard to know which injured Soldier needs care first. Sometimes, however, the Soldier that looks OK is the one who's in most desperate need of help. Although the situation below didn't occur in combat, it happened on duty and under circumstances similar to many accidents in theater — a vehicle rolled over while the driver was speeding. Read on for the lessons this Soldier learned the hard way.

It was a cold, windy day with blinding snow as we drove downrange on an ammunition training mission. Everything was running smoothly, and the weather was actually normal for that time of year in Alaska. Unfortunately, things were about to take a tragic turn.

As my partner and I were rounding a curve on a steep grade, we noticed a vehicle from another company had overturned. We saw that two young Soldiers — the vehicle's only occupants — had been thrown clear of the vehicle, which was starting to burn. One of the Soldiers was trying to help the other, who was bleeding badly and screaming in obvious pain. I covered and dressed that Soldier's injuries as best I could.

The other Soldier did not appear to be as seriously injured and was walking and talking clearly. But there were two things about him I will never forget. He had several deep cuts, but they weren't bleeding badly. Also, his eyes were big, black and vacant. But since he was walking and talking, I didn't think he was hurt badly.

Our radio wasn't working well enough to give emergency personnel our location, so we loaded the men into our vehicle and headed for the emergency room. Both men were placed on gurneys and rushed inside. The doctor treated the screaming and bloody Soldier first. The other Soldier was told to wait.

My partner and I went back to work. Later that day we returned to the emergency room to check on the men. We were shocked to learn the Soldier who hadn't appeared badly injured died while waiting for

treatment. The other Soldier was doing well in the recovery room.

I was crushed. What did I do wrong? What happened? I knew that man — we weren't great friends, but he was a fellow Soldier. One of the nurses took me aside and explained what had happened. Apparently, the Soldier died from internal bleeding, trauma and shock. If the doctors had known he wasn't bleeding from his wounds, they would've treated him differently. I told the nurse I knew he wasn't bleeding, but I didn't think it indicated anything serious. A man died because I didn't know what to tell them.

"I WAS CRUSHED. WHAT DID I DO WRONG? WHAT HAPPENED?"

I was a young, impressionable buck sergeant then. In the 30 years after that accident, I never failed to share this story with my Soldiers, hoping they wouldn't repeat my mistake. Many of you are in combat now and will see things even worse than I did that cold winter day. Learn the signs of shock and basic first aid for combat injuries. Take care of yourself and your fellow Soldiers, and remember that sometimes things are worse — much worse — than they appear.■

IS EVERYONE ON THE SAME PAGE?

CHIEF WARRANT OFFICER 2 MATTHEW D. RUSSELL
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Fort Campbell, Kentucky

I was stationed at Hunter Army Airfield, Georgia, in the 3rd Combat Aviation Brigade when I had an incident during a day training mission I'll never forget. My unit had recently received our UH-60s back from reset and it was my first pilot in command flight after revalidating in the national airspace system. As PC, I would be conducting four hours of continuation training with two pilots — two hours of day flight with one pilot, and two hours with night vision goggles with the other.

I was properly briefed and approved for my single-ship mission and was performing a brief with my crew. Before proceeding to the aircraft, I was informed another aircraft conducting a readiness level progression flight wanted to integrate formation flight into their tasks. They asked if they could join with my aircraft to accomplish that task. We were once again briefed and approved for multiship and the requirements for the air mission commander. We then sat down as a flight and briefed the routes of flight (off the reservation) and contingencies. However, when it came to actions on eastbound Blue Route R-3005, we opted to fly the route as published. My aircraft would be Chalk 1 so the other aircraft, as

Chalk 2, could conduct formation flight training. I thought nothing of it at the time and proceeded with my preflight and crew brief at the aircraft. Once the flight was up on radios, we confirmed our actions and set out to complete our training.

Everything went smoothly until reaching KP-26, an almost 90 degree left-hand bend in a dirt road with no identifiable terrain features, just east of Red Route. About a kilometer away was another significant turn to the right. While most aviators do not fly the route precisely as published — meaning they would ease around the turns rather than doing them aggressively — this day we flew the exact route.

I wasn't prepared when my pilot suddenly turned aggressively to the left, banking more than 45 degrees at 100 knots indicated airspeed. I looked out the green house and saw the belly of Chalk 2 less than two rotor disks away. Chalk 2's pilot applied aft-left cyclic and I watched as the aircraft ballooned away from me. Due to the evasive maneuver by Chalk 2's pilot, the PC — sitting in the left seat — couldn't see what had just happened. Chalk 2 then conducted a 360 degree turn, reacquired us and continued the flight. Fortunately, both aircraft and crews landed safely and were still around to gain some lessons learned.

Just as driving accidents often happen close to home, many aviation accidents occur while training in our own backyards. Continuation training has the potential to involve toxic levels of complacency. Every flight, we go out to the aircraft, perform a preflight and run down a crew brief. Aircrews tend to focus on who is flying together, what mission is being performed and if they're familiar with where they'll be flying. While all these factors come into play, for something as routine as a continuation training flight, most assume nothing could possibly go wrong. Unfortunately, this complacency — and the assumptions that came with it — is what nearly did in my aircraft and Chalk 2.

"I WASN'T PREPARED WHEN MY PILOT SUDDENLY TURNED AGGRESSIVELY TO THE LEFT, BANKING MORE THAN 45 DEGREES AT 100 KNOTS INDICATED AIRSPEED."

My biggest takeaway from this incident was not to take anything for granted. More accidents happen during routine missions than nonstandard ones. Ensure you are conducting detailed briefings, especially for flights in which personnel have not flown together. Stay alert to identify possible hazards, even on missions that seem routine. Consider their potential consequences and plan ahead so as to not be the next entry in the statistics column. Complacency doesn't always result in a lesson learned you can talk about later. Sometimes it results in a catastrophe. ■

LACK OF COMMUNICATION

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While stationed in the Southwest as an explosive ordnance disposal specialist, one of our unit's missions was to clear Air Force aerial bombing and gunnery ranges of unexploded and practice ordnance. Practice ordnance, while sounding innocuous, contains explosive charges to produce a white marking smoke and can, depending on the particular round, have explosive charges that are equivalent to 5 pounds or more of high explosives.

Our mission was to conduct a five-year clearance of an aerial bombing and gunnery range located north of the base. This would require additional temporary manning support. The mission would last a month and involve a border-to-border clearance.

Many support issues needed resolution for the mission to be successful, not the least of which was how to conduct a clearance on a very busy range used by active-duty, Army Reserve and National Guard forces. Previous attempts to clear this range had failed due to mission requirements, and the clearance was rescheduled several times. Therefore, sorely needed range maintenance had been allowed to slide. Sound familiar?

To address the maintenance issues, we coordinated with range maintenance personnel. We cleared critical target areas first, allowing personnel on the range to repair and build targets in these spaces while we conducted clearance operations in other sections of the range. Due to terrain features (deep canyons, ravines, mountains) and the size of the range, we believed this option offered the most safety for personnel while allowing us to accomplish necessary maintenance actions.

Good radio communications were a key element of this operation; personnel were required to be under cover when disposal detonations were executed. A range control section attached to White Sands Missile Range controlled access to the range we were clearing, which was about 60 miles from the base. WSMR conducted radar surveillance of the airspace and cleared aircraft onto and off the range.

At the beginning of the operation, we set up a base camp and emergency evacuation helipad on a bluff overlooking the airfield target complex. We set up an antenna, aligning and adjusting until we could get reliable communications with range control. Communication with range control was via handheld FM radios, truck-mounted radiotelephones and tactical radios. We also had signaling mirrors and red and yellow smoke for emergencies.

As the airfield target complex was the highest priority for clearance and maintenance, we cleared this area first. By the second week of the clearance, we were able to allow range maintenance to conduct their operations, repairing and rebuilding this target complex. They were in constant communication with my unit and range control; and although we had to put them under cover several times, they were able to accomplish the mission a week ahead of schedule. As they were clearing off range, they told range control range maintenance was completed. Range control marked this statement on their status board and cleared them off range.

At this time, my unit was in a ravine, pulling out 500-pound practice bombs, and out of communication range. Range control continued to attempt to contact us and at the end of our extended duty day, when we climbed out of the ravine and were on the way back to the base camp, we were asked to confirm that

maintenance activities on the airfield were complete. We were tired and looking forward to the end of the day and the cold beverages that were waiting for us. Without clarifying what they were asking, we confirmed maintenance was complete. We then proceeded back to base camp and secured our equipment for the night.

The route we took to exit the range for our billets meandered through the airfield target complex. As we were about halfway through, our vehicles were buzzed by a flight of four F-15s. We attempted to contact range control, but communication on the FM radio was intermittent. In addition, the phone number that we were to use, when dialed on the radiotelephone, did not go through. The aircraft flew out of sight and we decided to exit the complex back to the base camp.

As we turned our vehicles around, we heard a detonation on the far side of the complex and saw an aircraft pulling out of its bombing run. We immediately popped red smoke and abandoned the vehicles, seeking cover. The second aircraft, which was on approach, saw either the red smoke (or one of his wing mates did) because he aborted his run and initiated an emergency climb. They reassembled formation and did a flyover of our position. We again popped red smoke and used our signaling mirrors. They departed the range and we evacuated back to our base camp. We were able to contact range control from that location and found out that when the shift changed, the oncoming technician was not briefed properly. When we confirmed maintenance was complete, range control assumed all personnel had left and cleared the flight of F-15s onto the range.

Range safety depends on reliable communications and a complete understanding of terminology and procedures to operate on ranges. Because this was an aerial bombing and gunnery range, one might assume we would have a means to communicate with aircraft. We did not. It was not listed on our table of allowances as required, and we assumed procedures to communicate with range control were adequate. After that incident, it became standard procedure not to go on range clearance operations without a means of direct communication with overflying aircraft.

My unit and I were lucky; there were no injuries or deaths resulting from this incident. Several things bear emphasizing so this doesn't happen to you, including:

- Know your range procedures; get the required training from your range control officer.
- Conduct a hazard analysis of your operation; identify and mitigate all hazards.
- If you are unfamiliar with the types of operations that can be conducted on your range, ask questions.
- Communications, both for daily operations as well as in emergencies, must be reliable and tested every time you go on the range.
- Ensure your communications with range control are understood and that you both are operating with the same terminology.
- Do not conduct operations without the proper equipment or training.

When all else fails, make sure you have a backup plan in place.■

DRESS FOR THE

We all know moving is a chore. What I didn't realize, however, was that getting my motorcycle to our new home would be the most difficult part.

It was dusk when I faced a decision: Should I ride my motorcycle that evening or leave it behind and return for it over the weekend? The motorcycle was the last thing I'd need to move and I really didn't want to leave it, so I decided to ride it. In retrospect, that was the wrong move.

The weather that evening was clear with temperatures in the low 40s. I had all of my safety attire, including a helmet, jacket, gloves, jeans and riding boots. While my gloves were warm, they weren't wind resistant, and I wasn't wearing a thermal layer to protect my legs from the wind. But this was only a 23-mile trip, and I would be riding on state and country roads at no more than 55 mph. How difficult could it be? With my wife and daughter following, each in separate vehicles, I led our convoy out of our old neighborhood and onto the route that would take us to our new home.

At mile nine, more than a third of the way to our destination, we reached an intersection that had a gas station. It would have made for a good warm-up spot; but with darkness upon us and the temperatures falling, I decided to press on. I wanted to get this bike home before it got much colder.

We'd made it several miles past gas station when I noticed my hands were really cold. By now, however, we were on a stretch of road without any public places to pull off and get warm. If I needed to stop, I'd have to tough it out for eight more miles. A few more miles up the road, though, I began shivering and losing feeling in my hands, legs and feet. Still, I kept on. Then a wave of dizziness washed over me.

Up ahead I noticed a traffic light. I found myself hoping the light will turn red so I could put my feet on the ground and catch a little warmth from the motorcycle's engine. But as I neared the light, it turned green, so I continued riding.

When I crossed under that stop light, I realized I was in bad shape. My shivering has turned to shaking and the dizziness is unbearable. I knew I was going to have to stop. But where? Ahead, just a tenth of a mile, was another traffic light. "Will it turn red?" I asked myself. "Will it allow me a little reprieve?" As I approached, it did turn red! I slowed, came to a stop and place my feet on the ground.

The intersection wasn't busy. The light had changed to allow a car coming from a parking lot to enter onto the main road. Waiting for the light to turn green, I took note of my condition. I was in rough shape, so decided this is where I'd have to stop. If I didn't, I may crash. So, while still astride the bike, I pushed off onto the road shoulder. My wife and daughter followed suit.

When my wife arrived by my side, she asked if I was all right. I told her my symptoms. She offered to finish the ride for me but I declined. She then suggested I get in her car to warm up for a while. I agreed and started to dismount my bike.

With my dizziness and cold shakes, I focused all my effort to get the motorcycle kickstand into position. I managed to move it downward, but was having trouble getting it fully extended due to road's unevenness. I knew leaning the bike in the opposite direction of the kickstand would remedy the clearance issue I was having.

After several more unsuccessful attempts, I uprighted the bike and tried to find a better spot of asphalt to get down my kickstand. But as I leaned forward to start my push, I began to fall. My wife, still standing next to me, noticed I was crumpling like a rag doll and went into action. She grabbed my coat and tried to hold me up, but I went to the ground with my bike.

I stirred as my helmet hit the ground. I heard my wife yelling orders at my daughter to call 911. I started to move and noticed my shoe was pinned under the bike. I informed my wife and she helped pull me free. Despite my wife's protests, I tried to stand but soon thought better of it.

Paramedics arrived shortly afterward and examined me on the side of the road before loading me into the ambulance. Due to my involuntary shaking and slowed blood movement, however, they weren't able to get any medical test taken prior to arrival at the hospital. It would take several warming blankets and a few hours at the hospital before the doctors released me. They determined I'd been on the verge of hypothermia due to a lack of nutrition (I hadn't eaten all day), the cold temperature and my lack of warm clothing.

There's a good reason veteran cold-weather riders wear multiple layers of clothing, leather outerwear and even electrically heated riding suits to help insulate them from frigid temperatures. The combination keeps you warm and protected from the elements, creating a more enjoyable riding experience. Also, most heat loss occurs at the extremities, especially your head, so a full-face helmet will keep you warmer and less susceptible to wind chill.

I failed to properly prepare to a ride in cold temperatures. It's was experience I don't want to repeat again. Ride safe! ■

WINTER RIDING TIPS

Depending on where you live, the winter months can range from a minor drop in daytime highs to five feet of snow and temperatures in the single digits. As a result, preparing to ride a motorcycle during the winter can be as simple as throwing on an extra base layer of clothing or as difficult as negotiating ice on the roadway. Here are some tips to help keep you safe while riding during the winter season.

Your body

There's a good reason veteran cold-weather riders wear multiple layers of clothing, leather outerwear and even electrically heated riding suits to help insulate them against the cold. The combination keeps you warm and protected from the elements, creating a more enjoyable riding experience. Also, most heat loss occurs at the extremities, especially your head, so a full-face helmet will keep you warmer and less susceptible to wind chill.

Your bike

- A windshield will greatly reduce wind chill, keeping you warmer and more comfortable.
- It's critical to check your tire pressure before each ride during the colder months, as tires can lose upward of 5 psi every day.
- Cold-weather riding puts even more strain on the battery. Use a battery charger to keep it properly charged.
- Use the appropriate weight engine oil for the temperature range you will be operating your motorcycle.
- In extremely cold weather, it can take up to 15-20 minutes of riding before your tires reach their ideal operating temperature.

Your ride

- Winter riding usually means ever-changing road conditions and hazards, including ice, salt, gravel, wet leaves and pressure ridges. Maintain vigilance and adjust your speeds accordingly.
- Wet leaves are as slippery as an oil slick and just as dangerous. Be aware that moisture trapped under seemingly dry leaves can freeze, creating a hazard in your path.
- When you encounter areas of reduced traction, decrease your speed and lean angle while maintaining equal braking pressure between the front and rear brakes.
- Certain species of trees will release sap during the winter that can form a slippery film when combined with rain.
- Ice can be the single most treacherous aspect of winter riding and often lies in wait in low or shaded areas, bridges and overpasses. Your tires make almost no sound when they are running on the ice. If you notice your tires suddenly get quieter on that back country road, take heed. You might be on ice.

For some of us, the riding season doesn't end when winter begins. If you plan to ride this winter, keep the tips above in mind. Riding smart will help ensure you're around to enjoy all of the seasons.

MASTER SGT. JEFFREY LUTZ
Headquarters and Headquarters Detachment
Joint Force Headquarters
Indiana Army National Guard
Indianapolis, Indiana

PROFESSIONAL COURTESY

CHIEF WARRANT OFFICER 3 JESSICA BREWINGTON
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Professional courtesy can be defined as the courtesy given to senior-ranking officers or more experienced Soldiers. Unfortunately, it can also become a danger to a flight crew when inexperienced Soldiers are reluctant to announce hazards or lack the willingness to speak up and do what they know is right.

Being the junior pilot, I never wanted to displease or upset any of the seasoned aviators in my unit. Fresh out of flight school and naïve when compared to the other pilots, I assumed they were all squared away and I should never question them on their aviation/cockpit decisions. I presumed the pilot in command next to me knew it all and I could always depend on him or her in those sticky situations. Being a newbie, I looked up to my PCs like Homer Simpson gawks at a glazed donut. I thought to myself, "Wow! Will I ever be as great a pilot as they are?"

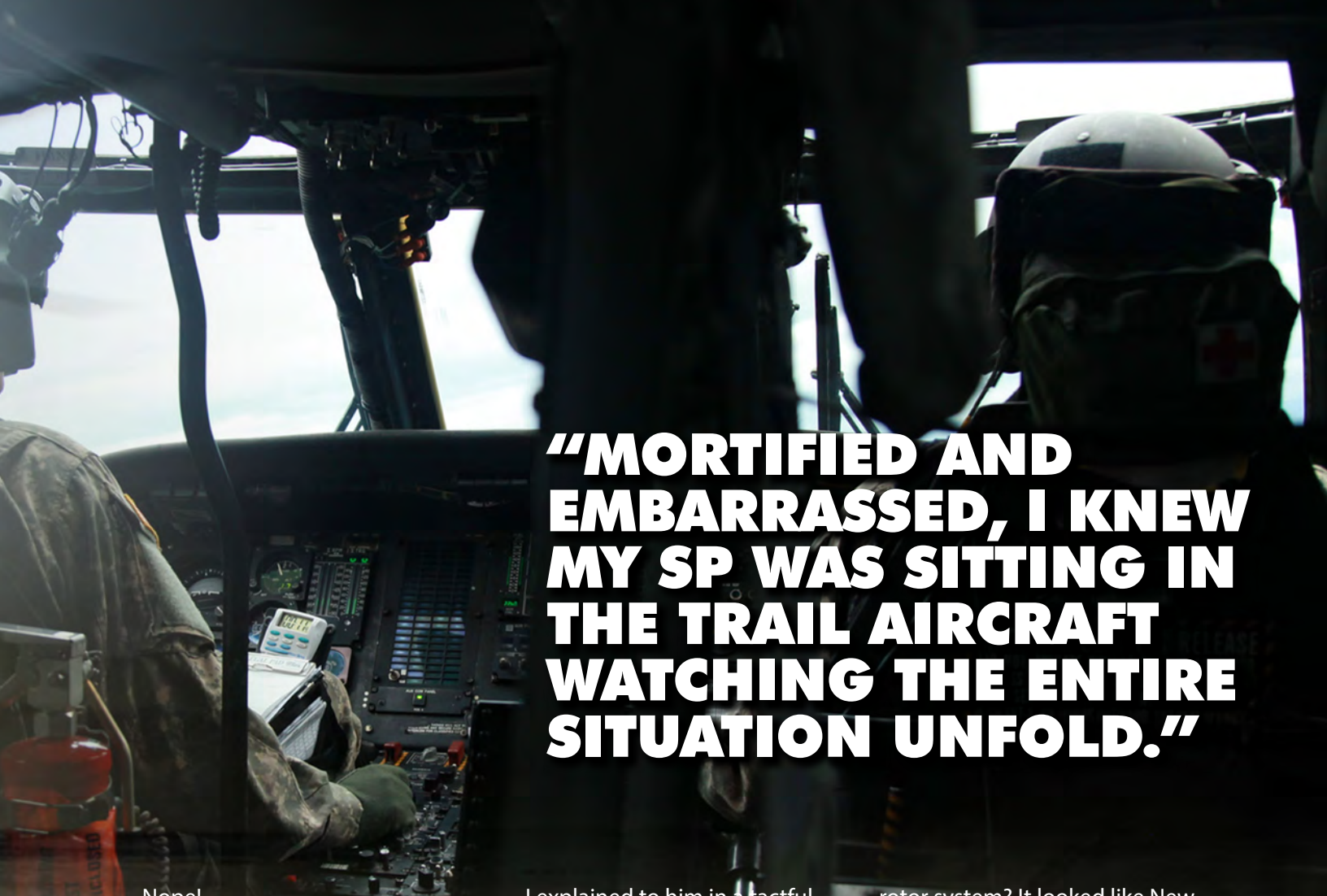
I always felt this way until one bad flight. You know, "the flight" — the one that makes you clearly see out of your aviation Coke-bottle glasses forever. My unconditional trust toward others was out the window, along with the preconceived notion that every pilot around me knew what they were doing.

The day started out like any other in Iraq. Our crew was pretty much a company internal crew, except for the PC of my aircraft, who we will call Capt. X to protect his identity. Capt. X was supplementing our company because our mission load was too heavy for the small number of PCs we had. Having supplemental PCs was standard, so I thought nothing of it. The mission was to take us from Balad to a small forward operating base in northern Iraq, with a refuel stop in Kirkuk. Sounds simple enough, right?

The crews took a little extra time preparing for the mission, considering flying north of Balad was not our usual area of operations. I had been to Kirkuk once prior to this mission, so I was somewhat familiar with the airfield operations; however, I still wanted to check out the landing directions and forward arming and refueling point procedures into Kirkuk for good measure. Again, this was no big deal.

The morning briefings and preflight went well. It seemed as if this was going to be a great day. Our passengers were on the aircraft and we were ready to go. The usual I-have-never-flown-with-you conversation occurred on the first leg of the flight. Where are you from? How many kids do you have? What are your hobbies? Blah, blah, blah. Becoming more comfortable with Capt. X, I relaxed and settled into my usual pilot role.

The trouble started when we flew into Kirkuk for refuel. After realizing Capt. X was oblivious to the airfield layout, I took the reins and guided us into the FARP. Capt. X had obviously not looked over the airfield procedures for Kirkuk — or even the airfield diagram for that matter. One small hiccup! That's OK; brush it off and move on with our day.



"MORTIFIED AND EMBARRASSED, I KNEW MY SP WAS SITTING IN THE TRAIL AIRCRAFT WATCHING THE ENTIRE SITUATION UNFOLD."

Nope!

"You are clear to back up out of the FARP," came over the radios from my standardization pilot/air mission commander in the trail aircraft.

"Great," I thought. I could hover backward over the taxiway without having to do a ton of maneuvering. Suddenly, Capt. X announced, "All right, what I want you to do is fly over this cement barrier and land on the taxiway," pointing at the airfield diagram provided by the night shift, who prepared our kneeboard packets the night before.

"ALERT … ALERT … ALERT!" Red lights started flashing and alarms began screaming in my head. What was this guy thinking? One, the airfield procedures stated we were not to overfly the cement barrier for any reason. And two, that was not a taxiway he was telling me to land on.

I explained to him in a tactful manner, "Sir, we are not supposed to overfly the barrier and I am pretty sure that is not a taxiway."

"No, we are going to fly over the barrier and land on the taxiway, just as I briefed," he said.

What could I do? I had just explained to Capt. X my interpretation of the procedures. And he wasn't taking any of my advice into consideration. Should I step on my PC's toes and request clarification from the AMC? Or should I give him professional courtesy and the benefit of the doubt?

I succumbed to the pressure and did what most other new PIs would do. I lifted the aircraft, flew over the barrier and landed on the so-called taxiway. Did I mention the Porta-Potty on the other side of the barrier flipped over, sending the dry toilet paper rolls into our rotor system? It looked like New Year's Eve, with tiny little flakes of toilet paper confetti streaming down in our rotor wash! Oh, and what else was on the other side of the barrier? A fuel bladder, which was now coated in the fresh liquid goodness from the Porta-Potty!

Mortified and embarrassed, I knew my SP was sitting in the trail aircraft watching the entire situation unfold. I sunk deeper into my seat. All I could do was play out the reprimand that would follow the flight.

After a long, convoluted flight and a two-hour after-action report, I learned a few lifelong lessons. Always do what you know is right. And do whatever you need to do to maintain the safety of your crew and passengers … even if you have to throw the professional courtesy out the window. ■

SPEAKING UP FOR SAFETY

CAPT. LESLIE BATTLE
174th Air Defense Artillery Brigade
Ohio Army National Guard
Columbus, Ohio

In the quest to be the best-trained, best-equipped military in the world, Soldiers and equipment are pushed to the limit during grueling exercises and operations. We cannot forget, however, that we must always consider and integrate safety into any activity, both on and off duty.

Unfortunately, Soldiers can feel intimidated by the need to complete the mission. The source of the pressure may be personal desires or by order of a superior. Military professionals must be able to express their concerns in an appropriate manner, especially when conditions may result in unsafe operations. I personally experienced such a situation as a young sergeant during an annual training exercise for the Ohio Army National Guard.

Camp Grayling, Michigan, was a popular training site for Guard commands of neighboring states. It has a well-developed cantonment area, coupled with realistic terrain in the field training sites. Soldiers earned driving hours during the trip from home station, and the available facilities made the relatively short stays fairly comfortable. However, training requirements sometimes dictated that Soldiers be shuttled between the field sites and the cantonment area to facilitate classroom instruction for certain required sessions.

For units with limited access to vehicles, Soldier transport had to be coordinated with other support units. My unit was camped in our designated field-training site. Many of us were required to complete certain briefings prior to the end of AT. I have to admit, I don't even remember what the training was, but considering it was not associated with a mobilization, I can infer that it was a routine, annual requirement.

One day, we were alerted about 6 p.m. that a vehicle was on its way to return us to the cantonment area. Those affected needed to bring the necessities for an overnight stay and wait for the vehicle to arrive. After waiting for an hour or so, another noncommissioned officer asked our first sergeant if there was a change in plan. He was advised to remain ready to leave, as he really didn't know why the vehicle was late or when it would arrive. So, we continued to wait.

As darkness arrived, we remained in the pickup area with our gear. A couple of times, our first sergeant came out to tell us that someone had radioed him that the vehicle was on the way. Again, we waited as instructed. Some Soldiers expressed a desire to return to the tents for a nap until the vehicle arrived, but they were warned to not leave the area because of the risk of missing the movement. And sleeping in the waiting area was deemed unsafe due to the potential for drivers not being able to see us in the dark.

About 2:30 a.m. — 8½ hours after we were first notified to be ready for transport — our battalion commander and sergeant major arrived in a truck. Evidently, they'd been advised we were still awaiting movement and our training was scheduled to begin at 7 a.m. Upon their arrival, we immediately began climbing into the cargo area of the truck with our personal gear.

In the flurry of activity, the sergeant major asked me, "Where are your drivers?" As the company safety NCO, I explained to him we had all been awake since 5 a.m. the previous morning and none of us were rested enough to safely drive the distance back to the cantonment area, which included passing through a busy area in a local town. The sergeant major was insistent one of our Soldiers drive. I was convinced, however, one of our Soldiers would likely fall asleep at the wheel and cause an accident with a cargo bed full of his peers.

I decided to word the situation in the plainest terms I could think of: "Sergeant major, we can put one of our Soldiers behind that wheel and instruct them to drive through town. And likely it would be you or the colonel who would have to explain why he crashed into a storefront or another vehicle should something happen." He looked at me and started to respond; but after considering my hypothetical scenario, he told me to finish getting our Soldiers in the truck. The sergeant major ended up driving.

Can I say I avoided an accident that night? Of course not, but I am proud to know I will never have to regret staying silent when someone needed to say something. Since that early morning, I have earned a commission in the National Guard and now serve as an additional duty safety officer for my brigade headquarters. As the years pass, I will never forget that night when I stood up for my peers and myself. Speaking up for safety might just save a life. ■

"SOME SOLDIERS EXPRESSED A DESIRE TO RETURN TO THE TENTS FOR A NAP UNTIL THE VEHICLE ARRIVED, BUT THEY WERE WARNED TO NOT LEAVE THE AREA BECAUSE OF THE RISK OF MISSING THE MOVEMENT."

MY WORST FEAR

GUNNERY SGT. PEDRO VILLARREAL
1st Battalion, 12th Marines, 3rd Marine Division

I grew up poor, so most of the vehicles my family owned were small and only seated up to four passengers. Some might not see that as a problem, but for our family of seven, it was always an issue. It wasn't uncommon for all of us to cram into the car for a trip to the store. And since we were packed in so tightly, we never wore our seat belts. Therefore, I always thought it was normal to not wear one.

"I HAVE ALWAYS WORN MY SEAT BELT AND MAKE SURE ANYONE RIDING WITH ME DOES THE SAME."

This way of thinking held true until October 1993. I was a junior in high school and in the process of joining the Marine Corps. My family and I had just returned from a vacation to Mexico, and the following day was the last of the school year. The next morning, my mother said I could stay home since we were all still so tired from our drive back from Mexico. However, I told her I felt fine and went on to school.

A Marine Corps recruiter picked me up from school that afternoon so I could take care of some traffic tickets. Once we were finished at the county clerk's office, we started making our way back to my house. A few miles from our exit, traffic began to back up on the interstate and state troopers were diverting vehicles onto a feeder road. I didn't think much of it, and the recruiter and I started talking about what kind of accident could be causing the tie-up. As we neared the accident scene, I saw my sister's damaged truck on the side of the road. I told the recruiter to stop, jumped out of his car and ran to the truck.

The ambulances had already left the scene by this time, so I didn't know who had been in the truck. I eventually found my sister crying on the side of the road and asked her what had happened. All I could understand her saying was "Mom!" I was confused and not sure what was happening. A state trooper asked me to go get my father, so I left to find him. I returned to the scene only to discover my dad was already there. I ran to him and asked where my mom was, but he didn't answer. As I glanced back toward my sister's truck, I could see there was a sheet covering a body on the interstate. I wanted to know who was under that sheet. My dad then confirmed my worst fear, telling me that my mom was no longer with us.

My sister drove a 1980's model Chevrolet Silverado that only seated three passengers. I later found out that my 4-year-old brother, 8-year-old sister, 2-year-old nephew and my mother had all been riding with my sister. None of the younger kids was in a car seat and no one was wearing a seat belt. When my sister lost control of the truck, my mom was ejected and landed on the interstate.

To lose a loved one always hurts. But to lose the person who gave birth to you and did everything in their power to ensure you were always taken care of hurts the most. Since that day, I have always worn my seat belt and make sure anyone riding with me does the same. I never want my children to know the feeling of losing a parent at such a young age. Seat belts save lives … but they only work if you wear them. ■

FYI

Seat belts are the single most effective traffic safety device for preventing death and injury. According to the National Highway Traffic Safety Administration:

- **Seat belts saved an estimated 13,941 lives in 2015 and could have saved an additional 2,814 people had they buckled up.**
- **Of the passenger vehicle occupants killed in 2015, 48 percent were unrestrained.**

THE RIGHT C

CHIEF WARRANT OFFICER 3 MARK SKALA
777 Special Mission Wing Special Operations Advisory Group

If you've been in the Army aviation branch for more than a day, you've probably heard, "Those who have and those who will." Here's my story:

It was a day like no other for my crew and me. Why? I was the Army's newest member in the pilot in command club. It was January 2011 at Shindand, Afghanistan, and I was eager to shake off my new PC butterflies.

The mission was a standard air mission request to local pick-up zones in support of Regional Command-West, something I had been doing for five months and, as a pilot, was very comfortable with. But things were different now. I was the guy who called the shots and was ultimately responsible for the new CH-47F and the lives of my crew and passengers.

At 5:30 a.m., we confirmed our air mission request and received an S-2 threat brief update and weather briefing. Everything, even the weather, looked good. But if you have ever flown in the mountains of Afghanistan, you know the weather is very unpredictable and can change at a frantic pace during that time of year.

By 8:40 a.m. the blades were turning, and at 8:59 a.m., we called tower requesting takeoff. Our first leg of the mission called for us to head north to Herat, just 59 miles away, with small mountains rising "only" 6,000 feet above mean sea level. Remember when I said the weather report was good? The Air Force guys try hard with what they have, but it's more like rolling the dice than a science. At least the guys went outside to take a look instead of just sitting at their computers.

Shindand elevation was 3,850 feet MSL, with the first set of mountains only 12 miles to the north at 5,000 feet MSL. We received clearance for takeoff and were on our way. The weather looked good and ceilings were as reported. After arriving at Herat, we saw the next mountain pass was socked in and knew our day was done.

I called operations and received clearance to cancel the rest of our mission, then contacted the weather office back at Shindand to ask about the current conditions there. They reported the weather was good. We headed back and, as we flew over the last mountain pass 12 miles north of Shindand, it happened. It was snowing!

Panic set in immediately. I then remembered something very important from flight school. "The urgency of certain emergencies requires the immediate and instinctive action by the pilot. The most important single consideration is helicopter control. All other procedures are subordinate to this requirement."

"WE HEADED BACK AND, AS WE FLEW OVER THE LAST MOUNTAIN PASS 12 MILES NORTH OF SHINDAND, IT HAPPENED. IT WAS SNOWING! "

Until you are in a situation like this, you will never be a true believer of that phrase. Luckily, I and the other pilot announced visual contact with the ground and used exceptional crew coordination. During this, my sister ship called to let me know they lost their UHF and VHF radios. That meant that if I decided to do a GPS approach, I would have to make their radio calls as well as my own for spacing during inadvertent instrument meteorological conditions. That wasn't something we really trained for. Murphy's law was in full effect!

Taking the radio problem into consideration, as well as the fact that I still had visual contact with the ground, I decided to push on. But now we were 200 feet AGL at 60 knots airspeed with less than one-quarter mile visibility, only four miles north of the forward operating base. I knew the terrain here and had my multifunctional display on terrain avoidance. I had flown in the same area the previous day and knew it was clear of hills and antennas. I called the tower and let them know where we were and gave a pilot report with a request for special visual flight rule entry.

The snow thinned when we were about two miles out, and I saw the maintenance facility and, finally, the runway. This made me think of another famous quote: "It's better to be on the ground wishing you were flying than flying wishing you were on the ground." Truer words have never been spoken. I still can't say I have experienced IIMC, but we were close. Looking back, I should have just done the GPS approach even if I had to pick up my Chalk 2 radio calls.

I thank my crew for excellent crew coordination and my co-pilot for picking up the workload for overall mission success. Even though you can't train for every curveball Mother Nature throws at you, you can — and hopefully will — revert back to your training in high-stress situations and make the right call. ■

A DEADLY COMBINATION

NEVER HANDLE A WEAPON WHILE UNDER THE INFLUENCE.

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