Flightfax

ARMY AVIATION RISK-MANAGEMENT INFORMATION

AUGUST 2005 ✦ VOL 33 ✦ NO 8

There are NO New Accidents

Flightfax

Commander and Director of Army Safety
BG Joseph A. Smith

Deputy Commander
COL George Bilafer

Publishing Supervisor
John Hooks

Managing Editor
Paula Allman

Graphics
Danny Clemmons

e-mail - flightfax@safetycenter.army.mil
https://crc.army.mil

CONTENTS

Flightfax **is published by the U.S. Army Combat Readiness Center, Building 4905, Fifth Avenue, Fort Rucker, AL 36362-5363. Questions about the editorial issues addressed in *Flightfax* should be directed to the editor at DSN 558-9855 (334-255-9855) or flightfax@safetycenter.army.mil. Distribution questions should be directed to Media and Marketing at DSN 558-2062 (334-255-2062).**

JOSEPH A. SMITH
Brigadier General, U.S. Army
Commanding

There are NO New Accidents (Part I)

LTC W. Rae McInnis, Retired
U.S. Army Aviation Technical Test Center

Author's note: I am writing this article after 4 years as a board president for the U.S. Army Combat Readiness Center (CRC). During this time, I have conducted 17 investigations and participated in the staffing and report preparation of over 200 more. There is a saying among the investigators that "There are no new accidents, just repetitions of the old ones." I hope by your reviewing these accidents, I can help you avoid the next repetition. This is the first of two articles that discuss aviation accidents that I have personally investigated. Part II will appear in next month's Flightfax.

Rules are made to be followed

In the first accident I investigated, the pilot in command was a highly experienced Department of the Army Civilian (DAC) aviator who made a mistake. How highly experienced? How about 20,000 rotary-wing flight hours? That's right, 20,000 rotary-wing flight hours, and in broad daylight he hit a set of wires that had been in the local flying area for over 20 years. Wires he knew were there. Wires he had crossed thousands of times. Wires that were marked on his map.

How did he let it happen? First, he was navigating from memory. When you fly in the same area for 20 years you figure you can do that. When the student pilot asked where they were, he came inside the cockpit, found a point on the map and showed it to him. This brought both sets of eyes inside the cockpit at a critical point when a set of high-tension wires appeared from behind the trees. By the time he realized they were there, it was

too late. He took the controls and tried to fly under the wires but was unable to do so. Fortunately, his 20,000 hours of experience enabled him to execute a controlled crash that caused no significant injuries. However, the aircraft was destroyed.

There were standards in place to prevent this accident. The brigade SOP required no less than 50 feet above the highest obstacle while in terrain flight. It also forbade dipping into open areas surrounded by obstacles. The student pilot on the controls not only was flying below 50 feet but also dipped into an open field that had the wires on the far end. Had the crew been operating IAW the standard, there would not have been an accident.

Two of the best aviators in the unit

A highly experienced crew consisting of an instructor pilot (IP) and a maintenance test pilot (MTP) were scheduled to conduct an annual proficiency flight. Between the two crewmembers were over 5,000 hours of flight experience. They were two of the three most experienced aviators in the company. The chain of command considered it a near "no risk" mission and crew. These two guys never had any problems.

The crew planned the flight, which included night vision systems, instruments, formation, traffic pattern work, and mountain flying. They prepared a risk assessment worksheet (RAW) and were briefed by the company commander. After preflighting the aircraft and ensuring they had plenty of fuel, they took off and flew straight into the mountains to do the mountain portion of the check ride first. They selected a relatively small landing zone (LZ) at 10,500 feet and attempted an approach to a landing. After passing below the highest obstacle, the MTP in the front seat of the AH-64A elected not to land and made an attempt to climb out of the LZ. As the aircraft began to climb, the rotor revolutions per minute dropped and the crew was unable to regain it. They had run out of power. The aircraft descended into 50- to 60-foot trees, rolled, and hit on its right side, destroyed. The MTP sustained a head injury and the IP had cuts and bruises.

The performance planning done before the mission indicated there was sufficient power to execute the maneuver. So what happened? The board found that the power margin available was less than 2 percent at the time of the accident. Two percent! Why would two aviators with the experience mentioned above put themselves in a position where a wind shift on final could cause serious problems? Why did the chain of command allow them to go into the mountains with full fuel tanks? The answer to the first question is overconfidence in their abilities, one of the most common causes of accidents. The answer to the second question is at the heart of this lesson learned.

The company commander who briefed them did not know they intended to go into the mountains first. He did not know they were going to the small LZ they selected. The mission brief indicated a training area and not the specific LZ. He did not know that the power margin would be less than 5 percent. The RAW indicated less than a 10-percent power margin but not the 2 percent planned. What he did know was that two of his best aviators were going out to do a check ride and they didn't need him questioning them on the mission planning. It is there that he made a mistake. He needed to ask the questions. CAPTAINS, TAKE NOTE: JUST BECAUSE YOU DON'T HAVE SENIOR WINGS DOESN'T MEAN YOU CAN'T ASK QUESTIONS. If someone had just asked questions, the crew would have realized they needed to do some traffic pattern work to burn some fuel before going to the mountains.

Perishable skills are indeed perishable

IPs always talk about perishable skills. The rest of us often roll our eyes and agree to keep from arguing. I am now a believer. Here's why. An 8,000-hour IP was conducting UH-60 night vision goggle (NVG) environmental qualifications during reception, staging, onward movement, and integration at the National Training Center (NTC). He had three aviators,

two crew chiefs (CEs), and a standardization instructor pilot (SP) in the aircraft on a moonless night with gusty winds from the west. The mission was to "hot seat" the three aviators in the right seat and for the SP to work with the CEs. The first portion of the flight went without incident, and the second PI to be trained moved into the right seat. He had flown for 30 to 45 minutes when the IP took the controls and announced he was going to demonstrate a crosswind landing and takeoff to the south. He successfully completed the landing and conducted a before-takeoff check. He applied power to execute the takeoff and began a climb. He never cleared the dust cloud and flew into the ground. The aircraft tumbled and was destroyed. The IP and one of the CEs suffered serious injuries.

The board determined that several factors contributed to the accident. There was a false horizon to the south caused by a ridgeline between the aircraft and the garrison area. It ran down from right to left. The winds were variable between 270 and 330 degrees at 20 to 25 knots. The board found that the IP on the controls began an unintentional left turn immediately after takeoff. This was probably influenced by the false horizon. The left turn and variable winds placed the aircraft in a tailwind condition that kept the IP from being able to clear the dust created by the downwash. The dust cloud was blown along with the aircraft. Lastly, the power application that had been sufficient all night when taking off into a headwind was not sufficient to maintain a climb in the tailwind condition.

The most significant finding of the board was that while the IP was current in NVG flight, he had flown fewer than 10 hours of NVGs in the previous 8 months. He had also missed a pre-deployment training exercise. The board found that he was current but not proficient in NVG flight. Combining this with the arduous conditions of the NTC led to disaster. His "perishable skills" had not been exercised sufficiently at home station to ensure his success at the NTC. There was another significant problem in this accident that leads to the next lesson learned.

The lesson to be learned here is WHEN YOU THINK SOMETHING IS WRONG, SAY SO. There's a reason two to six people in an aircraft are called a crew.

Crew coordination saves aircraft and lives

As the IP executed the takeoff described in the paragraph above, there was no help from anyone else in the aircraft. The PI and both CEs realized that the aircraft was in an unannounced left turn. They all knew they were in a crosswind condition, but no one told the IP he was turning or asked why he was turning. The board wondered why. The explanation from each of them was that they were sure the IP knew what he was doing. All of them had flown together many times before and all three trusted the IP without question. This phenomenon is often referred to as excessive professional courtesy. It occurs when a less experienced crewmember fails to question a more experienced member even when he knows something is wrong. This happens often. (See *Flightfax*, February 2003.)

Another example occurred when an MH-6J IP flew to an elevated platform with obstacles nearby to insert troops. The other PI later stated that he knew they were lower and closer to the obstacles than in previous iterations, but he didn't say anything because he was sure the IP knew what he was doing. The rotor system struck one of the obstacles, and the aircraft crashed and was not repairable. The PI suffered serious injuries but has fully recovered. The lesson to be learned here is WHEN YOU THINK SOMETHING IS WRONG, SAY SO. There's a reason two to six people in an aircraft are called a crew. Without help, everyone makes individual mistakes. It's our crewmates who must help us avoid them. ♦

—LTC McInnis retired from the Army in 2004 and currently works at the U.S. Army Aviation Technical Test Center at Cairns AAF, AL. He may be contacted at william.mcinnis@us.army.mil.

Investigators' Forum

Written by accident investigators to provide major lessons learned from recent centralized accident investigations.

If the Weather is Bad, DON'T Fly!

We train our crews over and over to avoid flying in deteriorating weather conditions. It's dangerous! If the weather is bad, don't fly! If the weather gets bad, turn around and go home or land where you are and wait it out. This article will attempt to draw attention to the continuing problem that we in Army Aviation struggle with every day.

I recently read an article in a leading magazine regarding FAA and General Aviation addressing accidents involving poor aeronautical decision-making. The article asks how many pilots prepare for a flight and then declare, "I think I'll have an accident today!" Why then, on occasion, will pilots consciously make a decision to continue visual flight rules (VFR) flight into deteriorating weather conditions? I know Army pilots don't intentionally set out to have an accident, but crews must manage risks associated with weather hazards and exercise effective decision-making skills.

The folks in civil aviation have the same concerns we do. I truly believe every Army Aviator should ask himself these questions before he encounters instrument meteorological conditions (IMC) while flying VFR:

■ What is my plan and what are my personal limitations on ceiling and visibility, even if we decide to disregard published standards?

■ When do I say, "Enough is enough!" and turn around or land?

■ Have I covered everything possible to prevent an accident?

Up to this point you are probably saying, "I've heard it all before and this old fool is just rambling!" There is no doubt in my mind that you have heard it all before. Do you do the necessary things to prevent an accident? What about your buddy? When was the last time you talked about accident prevention? Let me guess, it was during your once-a-year safety stand-down day, right?

I just completed an accident investigation where a CH-47D crashed, killing 18 people onboard and

destroying the aircraft. Do you want to guess what they were doing prior to the crash? You don't have to guess, you already know. The crew was continuing VFR flight into decreasing weather conditions. This was a flight of two, performing general support and resupply. Earlier in the mission, the pilot in command (PC) in the lead aircraft had flown into decreasing visibility and got away with it. The air mission commander (AMC) in Chalk 2 never demanded they turn around or land; instead he went along with the PC's decision to press on. You can pet a rattlesnake only so many times before it WILL bite you. The same holds true if you press on and push the envelope—one of these many times, you WILL crash.

If you are an Army Aviator still performing flight duties and you strap on an Army aircraft with the intent to fly, you better know your personal plan and limitations for flying VFR in decreasing weather conditions. If you are a person responsible for selecting AMCs, make sure they understand their responsibilities and are capable of making sound decisions when things start going bad. Army Aviation is serious business. American families put their faith, trust, and confidence in us to move their loved ones from point A to point B safely. They deserve nothing less than our total dedication and professionalism to do just that. ♦

—Comments regarding this accident may be directed to the Accident Investigations Division at the U.S. Army Combat Readiness Center, DSN 558-9552 (334-255-9552).

Mission: Multi-aircraft General Support

Hazards

- Continued flight into decreasing visibility
- Inadequate instrument proficiency
- AMC indecision

Controls

- Adhere to weather minimums & standards
- Command emphasis on maintaining instrument flight proficiency
- Make a decision; turn around, land or cancel the mission

Results

- 18 Fatalities
- Aircraft destroyed

Investigators' Forum

Written by accident investigators to provide major lessons learned from recent centralized accident investigations.

Flying in Bad Weather Causes Another Fatal Accident

This is yet another inadvertent instrument meteorological condition (IIMC) accident. The mission was a day general support mission, a 1½-hour flight to transport personnel across state from a military installation to a civilian complex. Although the mission was scheduled one week before departure, the pilot in command (PC) and the company commander discussed the mission just one day before mission departure. The PC completed and rated the risk assessment worksheet as low risk for a *day* visual flight rules (VFR) flight. This was considered the mission brief.

Poor pre-mission planning

The morning of the mission, the relatively inexperienced crew filed the flight plan and received a weather brief. The weather brief called for 600-foot ceilings en route and 2 miles visibility. The crew flew the UH-60L from the airfield to the VIP pad for passenger pickup. The passengers were loaded and the aircraft departed at 0630 local. Official sunrise was at 0710 local. I think you can see the pattern building here, not daytime yet and weather minimums below VFR.

By looking at the radar plots, we determined the crew had used the GPS to plot a direct course from home station to their destination. The crew had sectional charts onboard but had not used them to plan the route. When the aircraft departed, the ceiling and visibility must have been much less than predicted because the radar plot showed the aircraft at 34 feet above ground level at one point and less than 60 knots.

Approximately 20 minutes into the flight, the crew became disoriented, most likely due to the decreasing visibility and low clouds. The PC called approach control and requested an instrument flight rules (IFR) clearance. Approach asked for their position and the PC told them to standby. This fact alone led us to believe the crew didn't

know exactly where they were and the weather had come down enough for them to consider going IFR.

Approach attempted to contact the crew but didn't get a response. The crew had made the decision to commit to IMC, but they didn't know where they were when they made that decision. The aircraft struck a 1,700-foot television transmission tower support cable and crashed inverted in an open field, killing the crew and all passengers. Had the crew used the sectional to plan the route of flight, they would have seen the direct course took them right over a group of TV antennas.

Lack of command involvement

The morning of the mission, the weather was not good as described by experienced aviators driving to work that morning. One older, very experienced pilot said the ceiling and visibility were well below VFR, and he couldn't believe anyone would be flying that morning. No one in the chain of command reviewed the weather forecast and mission planning documents or contacted the PC at any time to get a mission update or briefing on weather conditions.

Lack of experience

The fact that the crew didn't plan the route of flight, didn't get an updated briefing, and didn't depart in daytime as briefed, with less than required weather minimums are all elements of lack of experience.

You can say this accident was caused by many factors, but when it is all said and done, the lack of planning, the lack of command involvement, and the lack of experience all played heavily in the cause of the accident. ♦

—Comments regarding this accident may be directed to the Accident Investigations Division at the U.S. Army Combat Readiness Center, DSN 558-9552 (334-255-9552).

"Oh My God, Tou

CW2 Katrina Bolls
Fort Polk, LA

It was late evening and our MEDEVAC crew got a call to transfer a stroke patient from the post hospital to a city 120 miles north. We were a crew of four—pilot in command (PC), pilot (PI), crew chief, and medic—flying a UH-1V helicopter. We also had a doctor and medical attendant onboard to assist with the stroke patient.

Our crew medic advised us to keep the altitude as low as we could due to the condition of the patient. The weather conditions were visual flight rules (VFR), and after a map reconnaissance and verifying the height of the obstructions along our route of flight, we decided to fly at or above 600 feet above ground level (AGL) on a direct course from hospital to hospital with the aid of night vision goggles. The PI on the controls was flying about 1,000 feet mean sea level, which was about

600 to 700 feet AGL. The PC was in the left seat navigating with the VFR sectional to assist with antenna and tower avoidance. We were also talking to radar approach, which had us on radar and assisting with obstacle avoidance hazards near our flight path.

The PC announced there should be a tower to our 1 o'clock and two towers to our 11 o'clock. Both pilots confirmed they had them all in sight and agreed we would split the difference and fly between them but above them. All three towers were indicated on the map as being below 430 feet AGL, so we were well clear.

About the time we were abeam the towers, the PI on the controls announced, "Oh my God, tower 12 o'clock!" The PC shouted, "Climb! Climb and come left!" The PI immediately maneuvered the aircraft up and left. We missed the tower but realized it had been at our altitude and directly in our path. This tower was neither indicated on the map nor had any lights on! That is when we realized just how close we came to striking the tower and possibly killing all seven individuals onboard the aircraft.

We immediately called approach and informed them of an unlit tower at that location and gave them the grid and approximate height of the tower. We were flying at an altitude that was at least 200 feet higher than the highest obstruction along our route. We followed the map diligently and had all crewmembers keep their eyes outside the aircraft to assist in scanning.

An hour later into our mission, the weather got considerably worse with isolated heavy rain showers, bringing the visibility down close to our minimums. Just think if our flight had been delayed an hour. There is no way we could have seen the tower during these poor weather conditions.

Upon returning to home station, we contacted base operations and informed them of the unlit tower. They posted a local NOTAM and also disseminated the information to all aviation units on post. The PI onboard our aircraft was also the unit's assistant safety officer, and he contacted the Department of Army Regional Representative (DARR) to give them the information. The DARR informed us that he would call the owner of the tower and notify them that the tower was unlit, unpainted, and had almost caused a fatal accident with a helicopter. The owner would also be informed that the tower was in violation of the law for not being lit, that he should post a formal NOTAM, and that he could possibly incur a fine from the FAA.

Approximately a week later, the PI and assistant safety officer conducted a safety survey flight with one of the standardization pilots to confirm the exact location of the tower, its height above ground, and to get an exact grid of the tower's location. They found the tower to be approximately 675 to 700 feet AGL—and still unlit and unpainted!

Lessons learned

■ Every crewmember should scan, especially at night.

■ Fly above the maximum elevation figure listed on the VFR sectional.

■ Report all hazards immediately for the safety of others. ♦

—CW2 Bolls is a UH-1V MEDEVAC PC at Fort Polk, LA. She may be contacted at (501) 626-3841.

Line of Death

CW5 J.J. Holmes
U.S. Army Combat Readiness Center

It was time to train another group of aviators on urban operations (rooftop landings). We had spent the week before in classroom training and were now ready to start urban site training.

We did our typical in-depth briefing and a few more classes on techniques. Then we went to the urban training site. We landed four aircraft on the ground in the training area and shut down. Even though we had diagrams and pictures of the site, it's always best to conduct a walkthrough of the area and see everything with your own eyes before conducting training.

The training area was a good size with plenty of buildings to land on. To enhance training, we split the training area in half and flew two aircraft on each half of the training site, as per our briefing. This allowed two aircraft to fly right traffic on the right side of the training area and the other two aircraft to fly left traffic on the left side of the training area. To make sure the aircraft crew knew their area and did not fly into the other training area, we established the "line of death."

A line of death is nothing more than you will stay on your side of the line and we will stay on our side of the line so we don't run into each other. The line of death has to be a prominent feature that everyone can identify from the air, in this case a road that ran down the middle of the urban site.

Our instructors always used the crawl, walk, and run training method. We started by conducting training on our side of the training area with single-ship traffic to flat roofs and then we trained on pitched roofs. After an hour, both groups of aircraft switched sides, as briefed, to get training on the other rooftops. Toward the end of the second hour, we joined up as a flight of four and made formation rooftop landings. This was all conducted during daylight prior to conducting the second period under night vision goggles (NVG) later that night.

Everything went as planned on the first day of training. The second day of training was the same as the first except the new pilots switched to another instructor pilot (IP) to get as many techniques from varied sources as possible. It's also a check to see if the other IPs were teaching students to the correct standards. The day period went as planned, as well as the first hour of night training.

After finishing the first hour of NVG training, we switched to the other half of the training area. Of course, after making the first landing to a rooftop, the IP got out and relieved himself of all the ice tea from dinnertime. The IP climbed back into the cockpit ready to continue training. The copilot took off from the rooftop and turned left instead of right traffic as he was briefed. He forgot that he switched to the new right-hand traffic pattern. As the aircraft started into the left-hand turn, the IP looked left and saw another aircraft that had taken off and was just to his left rear. There was no time to get completely on the controls, so he hit the cyclic with both hands and forced it full right. At the same time the IP yelled, "Turn right!" Just a fraction of a second later and this could have been a midair collision.

There are three lessons learned here. The first is the "line of death" could literally mean death if you cross it. Second, even if the other pilot was doing a good job, never let your guard down. The last lesson learned is if the IP comes on the controls to make adjustments, under no circumstances are you to let go of the controls until a three-way positive transfer of controls are executed. This last one is important because the IP only had time to push the cyclic to avoid the accident; he didn't have control of the pedals or collective at the low altitudes he was flying on takeoff. ♦

—CW5 Holmes is the Operations Division Chief. He wrote this article while attending Aviation Safety Officers Course 04-004. He may be contacted at jj.holmes@us.army.mil.

So, What'll It Be... Mad or DEAD?

CW3 David B. Higginbotham (Team Leader),
CW3 Marty Adkins, CW3 Blair Albrecht, CW3 Jim Funk, CW3 John Mattson, and CW3 Mark McIntosh

In 1986, I was a UH-1H crew chief at Fort Campbell, KY. My mission was to fly a night vision goggle (NVG) flight. On my way to the airfield, I saw the wreckage of several aircraft, all Hueys and Black Hawks. From my first look, it appeared the Black Hawk had taken the worst of it.

Over the next several days, we got the gist of what had happened. After leaving the refuel area, the pilot in command (PC) of the UH-1, while flying under goggles, had made his approach to the "inverted Y" slime lights of the running UH-60, which had been waiting to move into the forward arming and refueling point (FARP). After losing its tail rotor gearbox, the Huey continued forward about 75 meters, where it landed hard. The Black Hawk came off the ground, lost its tailboom and most of its other parts. Flying debris also destroyed my aircraft that was sitting on the parking pads adjacent to the crash site. Remarkably, there was only one minor injury to one of the Black Hawk crew chiefs.

After the accident, we learned the PC wasn't NVG current; the aircraft had three Red Xs when it took off, and the PC had a reputation for scaring his crewmembers. Long story short: they never should have taken off! Since the PC was apparently getting out of the Army in about 30 days, he was permitted to ETS without much inquiry.

Less than 3 years later and thoroughly enjoying the civilian life, I awoke one morning to hear about a UH-1 crash that had occurred in Massachusetts and had claimed the lives of six Delaware National Guard Soldiers. Little did I know at the time that the PC in the accident was the same one who had landed on the Black Hawk. When I did find out, my first thought was, "Why was that guy flying another Army aircraft?" Over the following years I heard more details about the accident PC. His reputation had followed him, and he apparently hadn't learned from his previous mistakes. I spoke to other pilots who had known him in Delaware and had refused to fly with him.

When a pilot has a well-known reputation like that, why is the command continuing to let him or her fly? What does it take to permanently remove that individual from flight status before a preventable disaster occurs? What would you rather do, make a pilot mad by telling him he's a cowboy or speak at his funeral? So, is it mad or dead?

The Army isn't the only service that has this problem, nor is it unheard of in the civilian arena. Many of us are familiar with the film of the 1994 B-52 crash at Fairchild Air Force Base and have heard the stories of that pilot's antics in the years leading to that crash. The National Transportation Safety Board (NTSB) has identified numerous events where the pilot involved in an accident had a prior history of poor performance, adverse employment actions, or even criminal activity. Their investigations found that errors by pilots whose backgrounds had not been checked prior to hiring were identified as contributing factors in seven crashes of scheduled air carriers involving 111 fatalities.[1]

In 1996, Congress enacted legislation called the Pilot Records Improvement Act (PRIA) (49 U.S.C. § 44703 (h) through (j)). This law:

> *"…was enacted to ensure that air carriers adequately investigate a pilot's background. PRIA was primarily the result of seven fatal airline accidents between 1987 and 1994 that were attributable to pilot error. Through [the NTSB's] subsequent investigation it was determined that, although the pilot(s) had a history of poor performance, the current employer had not investigated the pilot's background for competency or other safety related information."*[2]

Ultimately, it's up to us. It's up to us to cry foul when we see something not right; it's up to us to mentor the freshman aviators in our midst to help them survive to become senior aviators; it's up to us to ensure that reckless behavior is identified and, most importantly, documented; therefore, it's up to us to tell our commanders when there's a loose cannon in our group.

Within the Army, when pilots or aircrew members move from one unit to another, they often hand-carry their flight records to the gaining unit. I'm not making any accusations here, but this certainly presents the opportunity for an offending aviator to "lose" any of the incriminating information in his or her records. The gaining unit is left with one option: creating a new record for the aviator. The first line of the record states, "Previous records lost," and a potential rogue aviator is back in business. Another way high-risk aviators continue their careers is in the same way as my first example. They move from one unit or component to another, and the losing unit hasn't documented any of the problems they've identified. They leave it to the gaining unit to make all of the same unpleasant discoveries that the losing unit has recently survived. That is simply unacceptable. It is a disservice to the gaining unit, as well as the Army as a whole, where aircraft and personnel are such a precious resource.

On the positive side, the rogue aviator is an uncommon problem. Our civil brethren have put in place certain systems to minimize the likelihood of a poor performer's continued career in such a critical job as flying an aircraft. But on the negative side, when a bad pilot still manages to slip through all of the checks and balances, the results are often disastrous.

So here I am, years later, and back in the Army (National Guard now) and at the Warrant Officer Staff Course with the assignment of

[1] GAO-02-722, Aviation Safety, "Better Guidance and Training Needed on Providing Files on Pilots' Background Information"
[2] http://faa/gov/avr/afs/pria/

completing a staff project for either a decision briefing or publishing an article. What better subject to cover than the problem I've described above, as it applies to Army Aviation? My first stop was the U.S. Army Combat Readiness Center (formerly known as the U.S. Army Safety Center) for a data query. The helpful folks there listened to me and my classmates' questions and concerns and developed several very helpful queries from their accident and incident databases. Basically, they examined data from the last 10 years for pilots who had been involved in more than one Class A through C accident to see if there was any way to identify accident-prone aviators. But just like the stock market, past history was not a reliable indicator of future performance, which in itself is good news. Of all the accidents and incidents reviewed, 18 pilots were involved in more than one. And often there were additional circumstances that led to the first or second accident that weren't necessarily the lucky winner's fault. In short, the data didn't support our concern.

We were not the first to figure this out. In 1983, Darwin S. Ricketson, Jr., of the Army Safety Center, and Michael G. Sanders of the Army Research Institute conducted a much more detailed examination of the issue.[3] Their major finding was that "if accident proneness exists, it is very complex and there seems to be no clear-cut way to identify such individuals." Furthermore they stated, "There is no practical or valid way of identifying a high-risk/accident-prone Army Aviator based only on the number of accidents experienced." However, they strongly recommended that pilots who are identified as not having adequate self-discipline and who take unnecessary risks with their aircraft and fellow crewmembers should be identified and considered for removal from aviation service. And therein, my friends, lies the rub: It's up to us. Fortunately, the Army is developing some tools to help us.

At this writing, Army Aviation does not maintain a centralized system capable of performing queries, trend analysis, or producing summarized reports on individual skills or unit proficiency levels. The current DOS-based Automated Flight Records System (AFRS) is antiquated, unresourced, and abandoned by most Army Aviation units. However, the Army is in the final stages of developing a system called the Centralized Aviation Flight Record System (CAFRS). The planned system should provide a common database where authorized users can query an individual's flight hours, readiness levels, IATF information, and up or down slips. Among other things, the planned system will:

- Be globally accessible.
- Permit remote operations and performance tracking.
- Provide capability for automated visibility of enlisted and officer aircrew.
- Compile qualification and training data in a centralized database.

The availability of this information will allow commanders and other designated individuals another tool to assess crew selection in terms of individual experience levels and past history. Such information could even be used to identify potential hazards based on crewmember experience levels. Provided the right information is entered in the records, it will also permit a gaining unit to assess its new pilots, with an eye toward any identified high-risk behaviors.

But again, ultimately, it's up to us. It's up to us to cry foul when we see something not right; it's up to us to mentor the freshman aviators in our midst to help them survive to become senior aviators; it's up to us to ensure that reckless behavior is identified and, most importantly, documented; therefore, it's up to us to tell our commanders when there's a loose cannon in our group. That is, if you survive your first encounter with the loose cannon. ♦

—This article was written by CW3 Higginbotham, CW3 Adkins, CW3 Albrecht, CW3 Funk, CW3 Mattson, and CW3 McIntosh as a class project while attending the Warrant Officer Staff Course at Fort Rucker, AL.

"High-Risk Aviator Study", Darwin S. Ricketson, Jr., U.S. Army Safety Center; Michael G. Sanders, Army Research Institute (1983).

WAR Stories

There I was...

The Smoothest Landing Ever... WELL, ALMOST!

CW4(P) Haydn G. Decker
JFHQ, Oklahoma ARNG

Every person who flies Army aircraft will at some point ask himself, "Do I have what it takes to deal with that 'Ahhhh, sh@#$!' situation when it happens?" Some people might go their whole flying career without facing that tight spot; but most will experience a tricky situation and have a "There I was" story to share with fellow aviators. Sometimes these stories are in the spotlight for all to see; other times you'll only hear about them when you buy your buddy a round. But they all have two things in common: they are all tales of how a crew came together to handle a critical situation and lived to fly again, and they all have lessons that can be passed on. In keeping with Army tradition, here is one of those stories.

Several years ago, right after finishing the transition course and flight training in the C-23 Sherpa, our crew of four was returning from a 2-week training mission. During that 2-week period, I planned flight plans, briefed, and demonstrated several different ways the C-23 could be used in the Specials Operations community. Some events included cross-country flights of 1,000 miles plus, high-altitude operations above 18,000 feet on the pipe (C-23 aviator talk for being on oxygen and using the mask), and landing to high-altitude airports and short fields. We flew 3 to 5 hours every day. After a while, you start getting pretty good, damn good as a matter of fact! All my training and the opportunity to

practice with a very experienced instructor pilot (IP) was paying off. I felt comfortable in the aircraft and had demonstrated both left- and right-seat dependent tasks.

On the last leg of the trip, the IP asked me to perform a maximum-braking, short-field landing from the right seat. I wanted to make this the softest, shortest landing anyone had ever seen in a Sherpa. I called for all the appropriate checks and even had the flight engineer recalculate our landing weight, refiguring the new speeds for our approach and landing. I then bugged the airspeed indicator so I could be right on the required speeds for this perfect landing.

The only thing I didn't say was, "Watch this one!" The final approach was uneventful, slight round out at the bottom, flare, and the smoothest touchdown you ever felt with full brakes and full reverse on the props. It was one of the smoothest, shortest C-23 landings on record. As we taxied to the first turnoff, I called for the after landing check. As we started our turn, the right side of the aircraft dropped, dipped … uh, went down! It doesn't matter how you say it—the right-side tire went flat.

The aircraft was not completely clear of the runway, so now we have a runway that must be closed at a major international airport, which doesn't make the tower very happy. I immediately announced that we must have popped the thermal plug in the right tire. The thermal plug is designed to pop whenever the wheel and tire are overheated to keep from having an explosive blowout. I mean after that smooth touchdown and braking, that's what it had to be.

As the crew exited the aircraft, I could hear the laughter. I was the last one out and there it was as plain as day—a black skid mark from the point of touchdown all the way to where the tire blew. That's right, Mr. Cool! Mr. Watch This just landed with his size 13 on the right brake pedal at touchdown. This is the first lesson you learn in flying rotorcraft or fixed-wing—heels on the floor, heels on the floor, heels on the floor! I can still hear my instructor at Fort Wolters, TX, yelling, "How many times do I need to remind you, heels on…" You get the picture. This aircraft is equipped with an anti-skid system; but like most, the wheel has to be spinning first or the anti-skid system will not work.

Yeah, it cost me several beers over the years to buy the crews' silence anytime we were telling war stories. Anytime one of them started with, "I remember the time Haydn…" Before he could finish, I made sure his thirst was taken care of. Gee, I guess by writing this I won't have to buy next time. ♦

—CW4(P) Decker may be contacted at Joint Force Headquarters (JFHQ), OKARNG, Oklahoma City, OK. He is rated in the OH-23, UH-1-B, -C, -D, -H, AH-1G, OH-58, U-21, and C-22. He is also an IP in the OH-58 and UH-1. Mr. Decker wrote this article while attending Aviation Safety Officer Course 05-002 at Fort Rucker, AL. He may be contacted at haydn.decker@faa.gov.

Accident Briefs

Information based on preliminary reports of aircraft accidents

AH-64

D Model

■ **Class A**: A 4th Infantry Division Soldier was killed on 11 July 2005 when his aircraft crashed into a hillside while conducting team training. The accident aircraft was the lead AH-64D practicing day close-combat attack operations. During one of the simulated engagements, the lead aircraft failed to initiate a climb to clear rising terrain. The impact fatally injured the pilot occupying the copilot gunner (CPG) station and injured the pilot occupying the backseat. (PLR 05114)

■ **Class A**: During student training at a stagefield, an aircraft on final approach landed on top of another operating AH-64, contacting the main rotor system of the stationary aircraft. Debris from the collision damaged a third operating aircraft.

■ **Class A:** While in flight, the crew experienced a loss of power during a right bank, and the aircraft subsequently descended to ground impact.

CH-47

D Model

■ **Class E:** While conducting nap-of-the-earth (NOE) flight at night using the night vision system (NVS), the crew heard an unusual noise aft of the pilot station. The pilot in command (PC) suspected the SDC and landed the aircraft immediately. After landing, the SDC CAUTION light illuminated.

MH-6

M Model

■ **Class B:** Aircraft touched down tail-low during autorotation training, severing the tail boom.

MH-60

K Model

■ **Class E:** While at a hover, the TAIL XSMN CHIP light illuminated. The PC landed, taxied into parking, and shut down the aircraft. Maintenance found a gouge in the tail rotor pitch change shaft assembly and replaced the shaft assembly.

OH-58

A Model

■ **Class C:** Aircraft experienced an explosion in the engine area during a simulated engine failure. Aircraft was successfully autorotated to the ground. Engine explosion resulted in damage to the tail boom.

UH-60

A Model

■ **Class C:** Aircraft experienced a No. 2 engine failure in flight and crew performed a roll-on landing. Post-flight inspection revealed main rotor blade (MRB) damage from contact with the ALQ-144.

■ **Class C:** While taxing into a designated parking area, the aircraft's main rotor system contacted the black MRB of a parked aircraft. Accident aircraft sustained damage to three MRBs.

Fact: As of 11 July 2005, the Army has experienced 25 Class A through C AH-64 accidents this fiscal year. Of those accidents, there have been 10 Class A accidents, of which 8 occurred during daytime operations, resulting in 8 Soldier deaths.

L Model

■ **Class C:** The aircraft MRB tip caps contacted the top of a concrete barrier during parking. All four MRB tip caps required replacement.

■ **Class E:** On approach at 500 feet AGL and 60 KIAS, the STABILATOR CAUTION light illuminated and the audio sounded, indicating a stabilator failure from the auto mode. Maintenance replaced the stabilator actuator.

■ **Class E:** During engine startup, the FIRE light on the master warning panel illuminated along with the No. 1 engine emergency off handle. No fire was found. The aircraft was shut down without further incident. Maintenance replaced the No. 1 engine fire sensor.

■ **Class E:** The No. 1 engine pitch-change link (PCL) failed to go into LOCKOUT. Maintenance replaced the push-pull control cable and a maintenance operational check (MOC) was completed. Aircraft was released for flight.

RQ-11A

RQ-11

■ **Class C**: Aerial vehicle (AV) entered sporadic uncommanded flight modes and ultimately crashed despite attempts to gain control.

RQ-7A

RQ-7A

■ **Class B:** Ground control received high-temp indication immediately following launch. AV was unable to sustain climbout and descended, impacting the ground.

■ **Class C:** AV missed the arresting gear on landing and subsequently contacted a barrier, damaging the tail assembly.

■ **Class C:** AV failed to maintain rate of climb following launch and descended, landing hard.

■ **Class C:** AV failed to respond to recovery control input and initiated an uncommanded climb. Recovery chute was deployed, but AV sustained damage upon contact with the ground.

■ **Class C:** AV missed arresting wire on landing, bounded into the air, and missed arresting net, crashing into jersey barrier. The right wing was severed and fuselage sustained cracks.

RQ-7B

RQ-7B

■ **Class C:** AV experienced engine failure following overheating of the cylinder after approximately 4 hours of flight time. Recovery chute deployed, but AV sustained damage.

■ **Class C:** AV descended after takeoff into ground without recovery chute deployment.

■ **Class C:** AV was launched without being secured to launcher shuttle and subsequently fell to the ground, damaging propeller and wings, as well as the shuttle and launcher frame.

Editor's note: Information published in this section is based on preliminary mishap reports submitted by units and is subject to change. For more information on selected accident briefs, call DSN 558-9552 (334-255-9552) or DSN 558-3410 (334-255-3410).

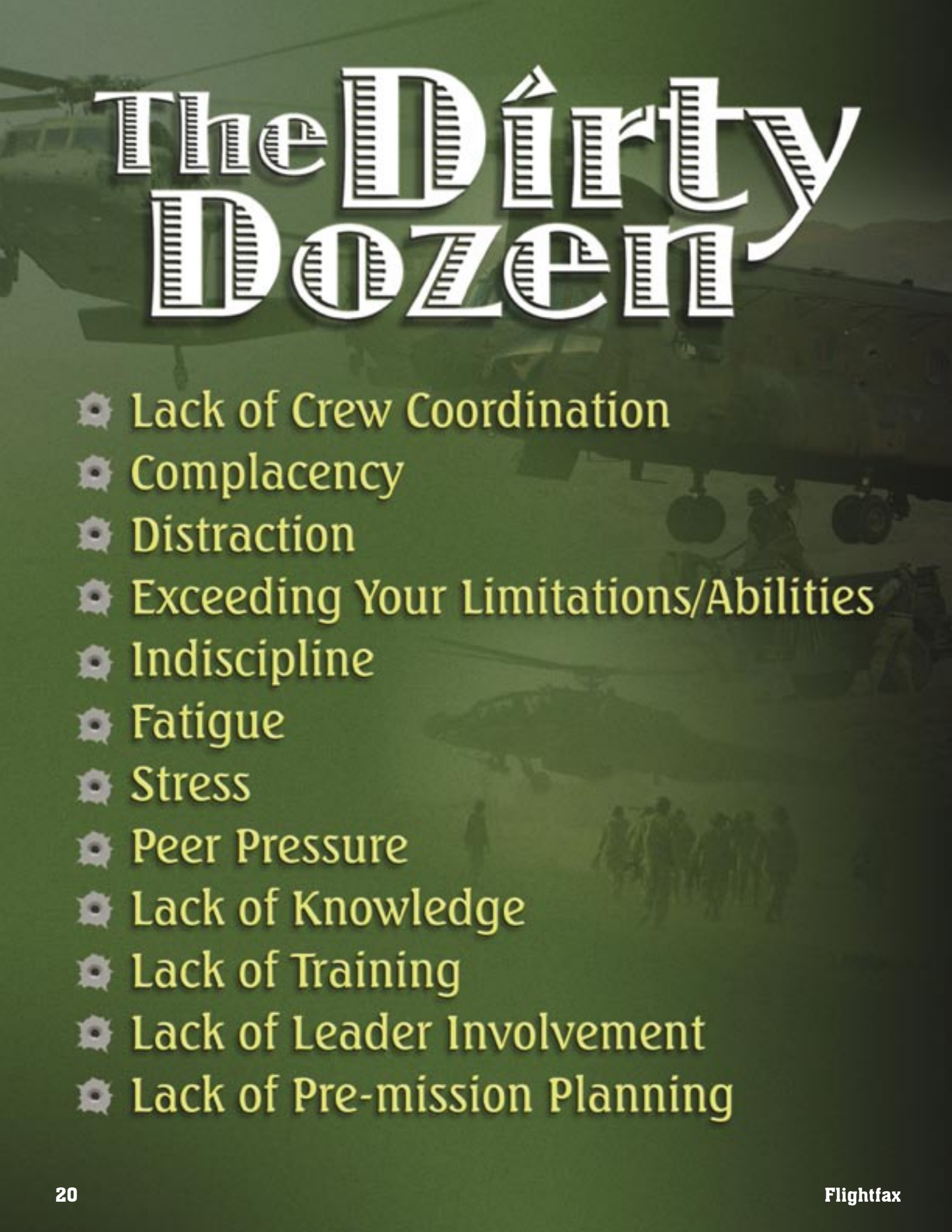
WE NEED YOU!

Are you an aviator, crew chief, or an aviation safety officer who enjoys writing? Shakespeare need not apply, but *Flightfax* is looking for authors to publish short articles (500-800 words) in our monthly magazine. Upcoming themes include:

- *September– "Flight Discipline"*
- *October– "Proper Continuation Training" (instrument flight proficiency)*
- *November– "Situational Awareness"*
- *December– "ALSE issues"*

Other topics that are needed for articles are crew coordination, inadvertent instrument meteorological condition (IIMC), brownout/whiteout, pre-mission planning, helicopter and fixed-wing operations, safety success stories, close calls and near misses, personal experiences, training tips, use of software, engineering controls, aviation maintenance, foreign object damage (FOD), and spatial disorientation.

If any of these topics interest you or if you have a few of your own, e-mail the editor at paula.allman@crc.army.mil.



The Dirty Dozen

- Lack of Crew Coordination
- Complacency
- Distraction
- Exceeding Your Limitations/Abilities
- Indiscipline
- Fatigue
- Stress
- Peer Pressure
- Lack of Knowledge
- Lack of Training
- Lack of Leader Involvement
- Lack of Pre-mission Planning