

AIRBORNE PUBLIC SAFETY ASSOCIATION



The

Safety

Wire

May 2020

SAFETY IS THE RESULT OF A PROCESS

We do not get safety because it is policy. Unfortunately, we do not always produce safety with good intentions. The simple possession of knowledge and experience does not automatically create safety. What will lead to safety? Putting our knowledge, experience, intentions and operational structure (policies and procedures) into play as a part of routine business will make us more professional. Professionalism generates safety while maximizing productivity. We cannot have one without the other.

Easier said than done. I frequently read articles denouncing the effectiveness of modern risk management techniques and theories. There is rarely recognition of the important difference between knowledge or possession of safety related tools, and the actual use of them. A firearm is of no use to an officer in a gunfight if it stays in the holster. Saying risk management isn't working is often akin to blaming that holstered pistol for not neutralizing a threat. So how can we perform better in our operational gunfights? Here are a few tips from the experts:

1. **Active efforts to do things better** – It's not necessarily about finding ways to get work done safer, it's also about looking for potential improvements that will make the operation more effective. Effective methods also lead to reduction in risk to people and equipment. This should be something that we do on a regular, day-to-day basis.



2. **Willingness to admit imperfection** – If we are going to do #1 correctly, we need to first admit that our operation, equipment and personnel (yes, including us) are imperfect. Once we accept there are improvements that can be made, we can start looking for ways to make things better. We cannot be so in love with policy and tradition that we are willing to sacrifice potential improvements.
3. **Communication about the difficult stuff** – High-fiving your buddy at work after an awesome call may help to confirm the components of the operation that are already working well. However, to make things more professional, we have to find a way to have the difficult conversations about the things that are stifling our professionalism and increasing risk. Avoiding the tough talks, holding back constructive critiques and silently sulking away from the crummy missions will sow the seeds of future disasters. This is especially tough when you need to have the conversation with the one person in your unit that you do not naturally get along with as well as others. Difficult conversations do not need to be confrontational. Some of these difficult conversations may surround limitations, especially human factors limitations.
4. **Respect for limitations** – Most accidents result from exceeding at least one limitation previously set by policies, procedures, operating handbooks or best practices. Knowing what the limitations are is a good start. That knowledge is useless to our quest for professionalism if we do not use that knowledge in our work.
5. **Keep it alive** – Looking for ways to make the operation better, being aware of imperfections and limitations, communications and all of the other aspects of a healthy, professional operation need to be a routine part of daily operations. The organization needs to remind people of the changes being made, imperfections being identified and addressed, and the limitations that have been identified as the best practices for the unit. Routine communication can be enhanced with reports on committee activity, responses to hazard reports, etc.

Professionalism is not achieved by how we intend to do our work or how much we know about our work. It is achieved by how we actually do our work. And safety, well that is determined by how professional we are.

“The lure of flying is the lure of beauty. The reasons flyers fly, whether they know it or not, is the aesthetic appeal of flying.”

~Amelia Earhart

Safety Management Systems

Regular communication on the activity of your SMS is critical in making it an active program. An SMS that is not 'kept alive' will soon fall into disuse and abandonment by unit members. A dead SMS is of no use to anyone. We are halfway through the year and this is a perfect time to refresh everyone on the goals and objectives that were set at the beginning of the year and bring the unit up to date on the progress made so far. The semiannual report does not need to be as extensive as the annual one. Your report should include:

1. Safety Goals and Objectives, including progress towards meeting them and plans for the second half of the year.
2. Reported hazards or incidents, as well as the response to those reports (new policy/procedure, equipment purchases, etc.).
3. Additional safety projects.
4. Safety Committee activity. All of the minutes from the meetings are not necessary, just a summary.
5. Any inspections or audits that were conducted and major findings, if any.
6. Summary of safety related training that has been conducted.



I recommend a one-page summary of the major points. Unfortunately, many people will not read past the first page. Please email me for an example if you need one.

EMERGENCY PROCEDURE OF THE MONTH

In each monthly emergency situation, discuss what you would do, as a crew, to respond to the following emergency. If the EP does not apply to your specific aircraft, think of something similar.

Engine failure after takeoff, less than 300' AGL

ONLINE MEETINGS

APSA conducts regularly scheduled online meetings for safety officers, maintenance technicians, SAR personnel, and UAS operators via a conference call you can join using your computer, mobile device or phone. Online meetings are open to any APSA member. Contract maintenance providers to APSA members are welcome to participate in the maintenance meeting as well. If you would like to join, send an email to: safety@publicsafetyaviation.org

The schedule for upcoming APSA online meetings is as follows:



Safety Officers:

Friday, June 5, 2020

12:00 PM - 1:00 PM EDT (1600 UTC)

SAR:

Wednesday, June 10, 2020

1:00 PM – 2:00 PM EDT (1700 UTC)

UAS:

Wednesday, June 17, 2020

1:00 PM - 2:00 PM EDT (1700 UTC)

Maintenance:

Wednesday, July 8, 2020

1:00 PM - 2:00 PM EDT (1700 UTC)

“Aviation is proof that, given the will, we have the capacity to achieve the impossible.”

~Eddie Rickenbacker

Reality Check...

Note: The following reports are taken directly from the reporting source and edited for length. The grammatical format and writing style of the reporting source has been retained. My comments are added in red where appropriate. The goal of publishing these reports is to learn from these tragic events and not to pass judgment on the persons involved.

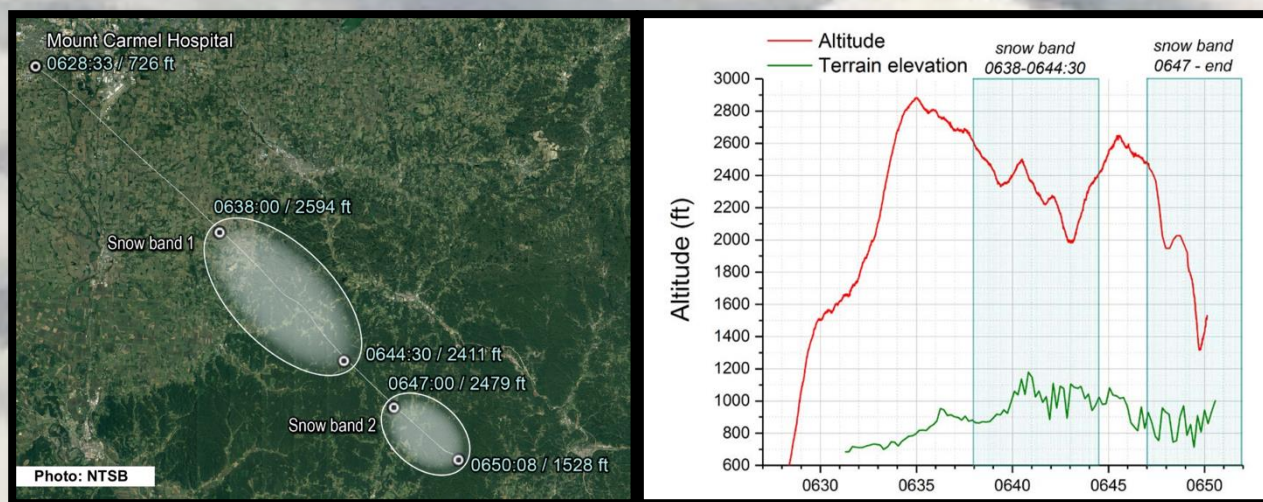
Aircraft: Bell 407
Injuries: 3 Fatal
NTSB#: CEN19FA072

<https://app.nts.gov/pdfgenerator/ReportGeneratorFile.ashx?EventID=20190129X14921&AKey=1&RType=Prelim&IType=FA>

On January 29, 2019, a Bell 407 helicopter collided with forested, rising terrain. The helicopter was doing business a visual flight rules helicopter air ambulance. The certificated commercial pilot, flight nurse, and flight paramedic were fatally injured. Visual meteorological conditions existed at the departure location, and company flight following procedures were in effect.

According to the Survival Flight Operations Control Specialist (OCS) on duty at the time of the accident, the night shift pilot had originally accepted the flight. The OCS said that, while he was on the phone with that pilot reviewing flight details about 0612, he was told that, due to the upcoming shift change, the day pilot would be taking the flight.

The OCS said that, while watching the helicopter on flight tracking software in the Operations Control Center, he observed that, about 15 minutes after departure, the helicopter made a turn to the right, then "a sharp left turn," which was immediately followed by a "no-tracking alarm." The emergency action plan was then initiated.



The helicopter wreckage was located on a tree-covered hill and exhibited significant fragmentation. The wreckage and debris path extended about 600 ft downslope on a heading of about 345° magnetic. A portion of the front-left skid tube was found at the

start of the wreckage path, followed by the main rotor hub and blades, tail boom and tail rotor, cockpit and cabin, and the engine and transmission deck. Tree branches broken about 30 ft above ground level were observed near the front-left skid tube. Additionally, one main rotor blade had separated from the main rotor hub and was embedded in a tree. The elevation of the wreckage area ranged from 850 to 980 ft above mean sea level (msl). There was no evidence of a postcrash fire, but a strong smell of fuel was reported by first responders when the wreckage was first discovered.



NTSB Report on operational factors and safety management issues related to this accident:
<https://dms.nts.gov/public/63000-63499/63015/629992.pdf>

Aircraft:	AS350 B2
Injuries:	3 Fatal
NTSB#:	CEN18FA149

<https://app.nts.gov/pdfgenerator/ReportGeneratorFile.ashx?EventID=20180427X55413&AKey=1&RTYPE=Final&ITYPE=FA>

An AS350 B2 helicopter was destroyed when it was involved in an accident near Hazelhurst, Wisconsin. The commercial pilot and two emergency medical services crewmembers were fatally injured. The helicopter was operated as a Part 91 repositioning flight.

About 2104, the pilot radioed the operator to report that the helicopter was ready to depart MSN for 60WI. According to information from the helicopter's on-board Appareo Vision 1000 recorder yawning and sighs were heard. The pilot requested clearance to 60WI and departed about 2107. About 1 minute later, the pilot asked if the medical crew was "alright back there," and one of the medical crewmembers responded "yup." One of the medical crewmembers then stated, "question is are you alright up there?" The pilot responded, "uhhh think so. Good enough to get us home at least."

About 2200, a medical crewmember stated, "I could go to sleep," and the pilot responded, "yeah that'd be nice huh." After about 2215, the medical crewmembers started non-aviation-related conversations, and the pilot was last heard during the conversations about 2229. Between about 2215 and 2242, the pilot made movements including raising his left arm near his helmet (which was mounted with night vision goggles), flexing his legs, adjusting his seating position, and changing cyclic position.

About 2243, the helicopter was operating in level flight at an airspeed of 126 knots and an altitude of at 2,280 ft mean sea level (msl). The artificial horizon indicator then showed the initiation of a right bank. The pilot's right forearm started moving along with the cyclic to the right, and the artificial horizon indicated a bank between 10° and 15°. The roll rate to the right appeared to increase rapidly, and the pilot's body, right forearm, and right hand (which was holding the base of the cyclic grip) appeared to move along with the increased roll rate.

A medical crewmember stated, "what are we doin'?" twice. The pilot's head moved to the right and could no longer be seen in the image, and the right bank increased to more than 90°. A medical crewmember stated, in a strained voice, "Ohhh [expletive]." The crewmember then shouted "what?" and the pilot's name. The other medical crewmember also shouted the pilot's name. The pilot's head returned to the image and moved to the left. His right hand still gripped the cyclic. The artificial horizon showed an inverted indication, and the torque gauge indicated a value beyond the red line. The emergency locator transmitter light illuminated while the pilot's head and upper body moved to the left. Sounds similar to a rotor high rpm horn and a grunt were recorded, along with a medical crewmember shouting the pilot's name. The recording contained no response from the pilot when the crewmembers shouted his name. The artificial horizon indicated a right roll of more than 270° with a pitch-down attitude, the altimeter indicated 1,900 ft msl, and the airspeed indicator showed 98 knots. The last two frames showed that the pilot's head and upper body had moved to the right and that the airspeed indicator displayed 70 knots, the artificial horizon indicated a 90° left bank with a pitch-down attitude, and the altimeter indicated 1,825 ft msl.

The company's satellite tracking of helicopter showed a normal route of flight until contact was lost at 2243. The helicopter wreckage was found about 0215 the next day.

*There are no new ways to crash an aircraft...
...but there are new ways to keep them from crashing.*

Bryan 'MaGu' Smith

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