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Flightfax®

Online Report of Army Aircraft Mishaps

We began the first 60 days of this fiscal year with a good trend; manned accidents are lower than last year. With this good trend news, reporting the hazards and recommended mitigations of emerging trends becomes difficult for this month's Flightfax. We certainly are not complaining, and can think of no better way to enter the holiday season.

So instead, we highlight a seasonal risk – IIMC. Pages 4 and 5 highlight IIMC accidents over the past 10 years. We've said it before, and acknowledge it now; it is easy to Monday morning quarterback the stats over the last ten years and point to what went wrong, which is essentially what is presented on those two pages. A much harder task is to review the cases over the last ten years and find an area that Aviation leaders can immediately address and mitigate the IIMC risks. Attempting to accomplish the harder task, we considered that in 21 Class A cases, the Air Mission Commander made errors that directly contributed to the accident. This is especially evident with respect to visual obscuration-related accidents, and particularly inadvertent IMC.

In seven of the thirteen IIMC accidents, the AMC made improper decisions that got the flight into IIMC. Examples include: allowing the flight to enter an area of deteriorating visibility; conducting the mission using expired weather information; no IIMC break-up contingency which resulted in an uncoordinated break-up and chalk 2 losing control of their aircraft; and ignoring a Blue Force Tracker text message from the battalion battle TOC instructing the flight to remain overnight due to adverse weather at home station. Overconfidence, inadequate IIMC training, and minimal AMC experience were cited as root causes of these errors.

Fifty-three percent of the IIMC accidents can be traced back to AMC failures, which points to an obvious mitigation suggestion. A good start may include reviewing who is appointed as an AMC, with the understanding AMCs are chosen based upon recent aviation experience, maturity, judgment, and their abilities for mission situational awareness, and the understanding of commander's intent. A further mitigation could include a thorough review of your unit's AMC training and certification program. The goal is to select individuals based upon their experience, training, and their demonstrated proficiency and tactical decision making skills. Tightening up on how AMCs are appointed, trained, and evaluated could potentially reduce IIMC risk by 50 percent or more.

Until next month, fly safe!

LTC Christopher Prather USACR/SC Aviation Director

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The Realities of Inadvertent IMC (Flightfax 8 Dec 1976)

"If inadvertent IMC is encountered climb to 2000', contact range control on FM 30.8."
"Descend immediately to regain VMC when IMC conditions are experienced."
"Inadvertent IMC flight is prohibited at all times."

The above are not excerpts from some inadvertent IMC plans currently in existence – they are the plans. They also represent the attitudes that cause inadvertent IMC to be Army aviation's number-one killer. No matter how much we wish to ignore the possibility of encountering inadvertent IMC or rationalize that it really doesn't exist at all – "people shouldn't attempt VMC flight when the weather is marginal" – it still happens, generally with catastrophic results. The question is why? Why does an instrument-qualified aviator flying an instrumented aircraft lose control under these conditions when he obviously demonstrated skill in instrument flight by obtaining the qualification? The answer lies primarily in one significant difference between deliberate and inadvertent IMC flight – PLANNING. The pilot undertaking a deliberate instrument flight has studied the weather, thoroughly charted the route, computed fuel requirements, has all the necessary navigation publications, and has a clearance from ATC to cap it off. He knows exactly where he's going and how to get there. Inadvertent IMC, on the other hand, is an unplanned event occurring generally at low airspeed and low altitude, with the crew totally unprepared for instrument flight. Psychologically, it's a nightmare.

The pilot that fears the consequences of blundering into the ATC system without a clearance is probably unsure of his position, and very likely does not have instrument navigation charts available. Add to this the utter lack of a preplanned course of action for a safe recovery and disaster is virtually assured. So, to answer the question of why the pilot lost control – he didn't – he never attempted to control the aircraft, only tried to return to VMC – generally in a diving 180-degree turn, terminating in a high speed ground impact.

Now what can be done about this? To begin with, the pilot has to be convinced that a system insuring his safe recovery has been established; therefore, each installation with aircraft assigned must develop a simple, *workable* IMC recovery plan. Keep in mind the pilot will have to memorize the altitude to which he is to climb, the facility to contact and the recovering airfield, so keep these immediate actions as straight-forward as possible. Additional details such as frequencies, en route fixes, lost communication procedures, etc., must also be made available to the pilot in the form of a local publication permanently carried in the aircraft. All of which brings us to the next point – aircraft and aircrew suitability. Although both civilian and military aviators have tried unsuccessfully for years to disprove this – you still can't fly instruments without instruments nor can you fly instruments when you can't interpret them – so before trying to hack marginal VMC, be absolutely certain that both you and the aircraft are prepared for and capable of instrument flight.

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The final and most critical consideration – aircraft control. Any survivor of an inadvertent IMC situation will attest to the startling suddenness of the encounter. There is simply no time for an orderly transition to instruments – as in an ITO – which very probably accounts for the fact that in the majority of the inadvertent IMC accidents, the pilot had made no apparent attempt to go to the gauges. Since an attempted immediate return to VMC is virtually a suicidal act, and the pilot has no instrument scan established, the situation is certainly grim – but far from hopeless.

In recognition of this very critical transition period, HQDA directed USAAVNC to develop an immediate action procedure which would enable the pilot to rapidly transition to instrument reference. The procedure developed, which is now DA policy, is a simple step-by-step technique, bringing the instruments into the pilot's scan in order of criticality as follows:

1. ATTITUDE INDICATOR – level the aircraft. Quite obviously, the most important first step, as no following control input will achieve the desired response if the aircraft is not in a level attitude.

2. HEADING INDICATOR – maintain heading. Turn only to avoid *known* obstacles. Don't compound things by getting vertigo.

3. TORQUEMETER – adjust to climb power. Let's get away from the hard ground as fast as possible.

4. AIRSPEED – adjust to climb airspeed.

5. RECOVERY PROCEDURES – initiate only after transition to instrument reference is complete and the aircraft has reached a safe altitude. Don't distract yourself from the primary job of regaining control of the aircraft. Save the yelling for later or let the copilot do it.

Remember this above all else – **WHEN INADVERTENT IMC IS ENCOUNTERED, YOU MUST GO ON INSTRUMENTS. THERE IS NO OTHER OPTION.** An immediate landing or a 180 away from the weather will work only when you are still VMC – and, unfortunately, we have the fatalities to prove it.

We should all bear one thing in mind when we talk about a troop who 'rode one in.' He called upon the sum of all his knowledge and made a judgment. He believed in it so strongly that he knowingly bet his life on it.

That he was mistaken in his judgment is a tragedy, not stupidity. Every supervisor and contemporary who ever spoke to him had an opportunity to influence his judgment, so a little bit of all of us goes in with every troop we lose.

IIMC Accidents – The Past 10 Years

In the last 10 years the Army has experienced 230 rotary wing Class A mishaps. Approximately one third (77) were accidents with fatalities totaling 240 deaths. A review of these Class A accidents shows that at least 13 accidents occurred due to inadvertent instrument meteorological conditions (IIMC) and/or continued flight into marginal weather conditions. These 13 mishaps (6%) accounted for 50 (21%) of the total fatalities that occurred during the time period. 10 of the 13 accidents occurred under NVD/N flight. Breakdown by airframe shows 7 UH-60; 3 AH-64; 2 CH-47; and 1 OH-58D.

- ❑ While conducting a **UH-60L**, cross-country support mission, the aircraft encountered unforecast deteriorating weather conditions at night and attempted to push through the deteriorating weather conditions. After unsuccessfully attempting to continue the mission under visual meteorological conditions (VMC), the crew attempted to transition to IFR. As the flight crew attempted to transition to IFR, the aircraft struck a TV transmission tower support cable and crashed, resulting in destruction of the aircraft and 7 fatalities.
- ❑ During the conduct of night vision goggle (NVG) multi-aircraft operations at 500 feet above ground level (AGL), the lead aircraft in a flight of two **UH-60L** aircraft encountered instrument meteorological conditions (IIMC). During the execution of inadvertent IMC procedures, the aircraft descended rapidly and struck the ground. The aircraft was destroyed and five of the seven personnel on board were injured.
- ❑ During night vision goggle currency and readiness-level progression training, the crew of a **UH-60L** encountered instrument meteorological conditions. The aircraft entered 70- to 80-foot-tall trees in a 30-degree nose-low attitude, with a 45-degree left bank angle, at approximately 80 to 100 knots. The aircraft was destroyed and three crewmembers were fatally injured.
- ❑ While en route to conduct a night vision goggle (NVG) reconnaissance, surveillance, and orientation mission, the **OH-58D** accident aircraft crew encountered low visibility and attempted to execute a 180-degree turn to the left. The nose pitched up, causing a corresponding increase in altitude and decrease in airspeed. The accident aircraft rolled out of the left turn and went into a right turn. The crew attempted to regain flight control when the aircraft struck the ground, causing significant damage to the aircraft and fatally injuring the pilots.
- ❑ While conducting a night, single-aircraft, night vision goggle, cross-country training flight, the crew members encountered inadvertent instrument meteorological conditions. The crew members of the **UH-60L** lost control of the aircraft and struck the ground in a 10 to 15 degree nose-low attitude. The aircraft was destroyed and the three crew members received fatal injuries.
- ❑ While returning to base in an **UH-60A** at night, utilizing night vision goggles with heads-up display, the pilot in command (PC) encountered inadvertent instrument meteorological conditions. As the PC transitioned to instrument flight, the aircraft's airspeed increased but

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instead of a positive climb, the aircraft descended and impacted the ground. One Soldier was fatally injured, seven were seriously injured, five sustained minor injuries, and the aircraft was destroyed.

❑ While returning to base at the end of a night mission utilizing night vision devices, the **AH-64D** aircraft encountered instrument meteorological conditions and attempted to reverse course in order to avoid the weather. The aircraft slowed to near zero airspeed, entered a high rate of descent, and impacted the ground. The aircraft rolled downhill approximately three times and came to rest upright. Both crew members sustained minor injuries and the aircraft was destroyed in a post-crash fire.

❑ While returning to the stagefield following night live-fire training, the **AH-64D** aircraft with the instructor pilot on the controls, failed to maintain orientation while executing inadvertent instrument meteorological conditions (IIMC) recovery procedures. As a result the aircraft descended and impacted the ground. Both crewmembers received fatal injuries.

❑ While performing a multi-ship, day out, night vision goggle return with simulated troop insertion, the pilot inadvertently entered instrument meteorological conditions. The **UH-60L** aircraft developed an unusual attitude which became unrecoverable. As a result, the aircraft crashed through a set of large diameter power lines and impacted the ground. Three crew members received fatal injuries and the aircraft was destroyed.

❑ The accident occurred while conducting night vision goggle continuation training in deteriorating weather conditions. The **UH-60A** aircrew elected to circumnavigate the lowering weather conditions via an alternate route. While following a paved road, the aircraft encountered heavy rain showers and fog and struck the military crest of a ridge line, impacting trees and rocks. The aircraft was destroyed and all five crewmembers sustained fatal injuries.

❑ While attempting to return to home station from a night area reconnaissance mission in marginal weather the crew of the **AH-64D** failed to maintain or recover orientation. As the aircraft initiated a turn to reverse course, the aircraft established an unrecoverable attitude and crashed with the crew receiving fatal injuries and the aircraft being destroyed.

❑ While conducting a day time, two-aircraft general support mission, the crew of the **CH-47D** failed to maintain orientation and aircraft control after inadvertently encountering instrument meteorological conditions (IIMC) and crashed, resulting in 18 fatalities and a destroyed aircraft.

❑ While conducting a day, single-aircraft, cross-country training flight, the **MH-47G** did not adjust in-flight procedures in response to meteorological obscurations by altering altitude or flight path sufficiently to avoid clouds or areas of restricted visibility. Nor did they adjust airspeed to allow the crew to see obstacles in time to avoid them or commit to instrument flight procedures when deteriorating weather reduced their flight visibility. As a result, the aircraft crashed into a television tower and support cables, resulting in 4 fatalities, 1 injury and a destroyed aircraft.

Academic Training

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The OPTEMPO aviation units have been operating at for a decade has created challenges on many levels. I am going to highlight one that stands out to me from my various assistance/assessment visits to units in and out of the AOR during the past couple years.

First of all, let me say that aircrews have been very professional in accomplishing some amazing feats. Our aviation force's mission focus and execution is the best in our storied history. However, with such a high OPTEMPO, aircrews have slipped a bit in their general aviation knowledge. This is substantiated by the high failure rate on the written and oral evaluations we give during our visits. In addition, we've also seen weak academic programs clearly lacking effective leadership involvement. The result is an aviation force where the majority of crews have never seen a robust academic training program.

The academic training aviators receive in flight school provides a solid foundation that should be continuously built on for an entire career. Unfortunately, some of the aviators who have graduated flight school since the start of combat operations have not been effectively doing that. After 11 years of combat operations some of these aviators are now senior trainers and leaders. By contrast, the pool of master and senior aviators who graduated flight school prior to combat operations and know how to conduct a robust academic training program is rapidly dwindling.

As we approach the end of combat operations and dwell continues to increase, aviation leaders must firmly emphasize academic training to reverse this trend. They must also take advantage of our master aviators — the pillars of aviation knowledge — before they retire and are unavailable to guide and develop junior aviators in their craft. Emphasizing academic knowledge and continuing mission-focused training while we transition to a garrison force, will result in safer, more professional aircrews, ready for any contingency operation - home and abroad.

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Mishap Review: Flight-related fatality

During a MEDEVAC hoist training mission, a PAO camera man, while filming the operation from a nearby tree-line, was struck by falling tree limbs resulting in fatal injuries.

History of flight

The mission was to conduct external hoist and patient loading/unloading training as part of an overseas humanitarian and civic assistance exercise. The mission was considered a standard mission and authorized by the exercise commander. Weather at the time and location of the accident was clear skies, 7 miles visibility, winds calm, and OAT of 26 C.

The HH-60 arrived at the training site approximately 1000 hours local. As part of the mission, a PAO camera man was assigned to film the training. The first four iterations of the hoist training were filmed from inside the aircraft. The aircraft then landed and dropped of the camera man who filmed another four iterations from the ground.

Following completion of the hoist training, the aircraft landed and picked up seven simulated ambulatory patients. The camera man repositioned approximately 75 feet to the front of the aircraft to film the aircraft's departure. His position was located in a tree line under a large cedar type tree. On take off, as the aircraft was climbing to gain altitude to clear the tall trees at the end of the LZ directly over the camera man, the rotor wash dislodged three to four large tree limbs which fell and struck the individual, causing fatal injuries.

Commentary

The accident board determined the accident was caused by environmental factors. Broken tree limbs falling to the ground and injuring personnel generally cannot be determined nor anticipated. But, when looked at holistically, caution should be taken when operating under trees during aviation operations or windy conditions. The board recommended that units be briefed on the facts and circumstances of this accident and include this risk and associated controls in developing their risk assessments.

Class A – C Mishap Tables

	Manned Aircraft Class A – C Mishap Table									
	Month	FY 12					FY 13			
		Class A Mishaps	Class B Mishaps	Class C Mishaps	Fatalities		Class A Mishaps	Class B Mishaps	Class C Mishaps	Fatalities
1st Qtr	October	2	2	6	1		1		5	
	November	1	0	13	0			1	2	
	December	2	2	6	4					
2nd Qtr	January	2	0	11	0					
	February	2	1	6	0					
	March	1	2	11	0					
3rd Qtr	April	2	1	5	4					
	May	1	0	3	0					
	June	1	0	2	0					
4th Qtr	July	4	3	10	1					
	August	2	4	7	0					
	September	1	0	2	0					
	Total for Year	21	15	82	10	Year to Date	1	1	7	0

as of 26 Nov 12

UAS Class A – C Mishap Table									
	FY 12 UAS Mishaps					FY 13 UAS Mishaps			
	Class A Mishaps	Class B Mishaps	Class C Mishaps	Total		Class A Mishaps	Class B Mishaps	Class C Mishaps	Total
MQ-1	5	1		6	W/GE	2			2
MQ-5	1		2	3	Hunter			3	3
RQ-7		5	19	24	Shadow			3	3
RQ-11			1	1	Raven				
MAV									
YMQ-18	1			1					
SUAV			5	5	SUAV			1	1
Aerostat	2	5		7	Aerostat				
Total for Year	9	11	27	47	Year to Date	2	0	7	9

as of 26 Nov 12

UH-60 Five Year Accident Trend Review

During the last five Fiscal Years (FY08 – FY12), there were 31 recorded UH-60 Class A mishaps, resulting in 39 fatalities. Seventeen of the class A mishaps occurred under NVGs, thirteen during the day and one night unaided. Additionally, there were 25 Class B and 116 Class C mishaps. A review of the mishaps reveals the following:

- 93% (29) of the 31 Class A mishaps were caused by human error, 1 suspected materiel failure, and 1 cause factor not yet been reported.
- Class B's consisted of 22 (88%) human error, 2 (8%) materiel failures and 1 lightning strike.
- There were 116 reported Class C mishaps with 94 (81%) human error, 17 materiel (15%), and 5 bird strikes.

Leading accident events (Class A)

- **Power management/excessive maneuvering**. There were seven accidents associated with the aircraft running out of power for the conditions/maneuver being performed or appropriate power was applied too late to be effective. (1) While initiating a go-around under NVGs, the rotor RPM decreased and the aircraft descended and impacted a rock formation causing 10 fatalities. (2) During an approach to an 11,000 foot landing site, the aircraft's rotor RPM decreased and the aircraft settled and impacted the terrain. (3) During approach, the aircraft developed a low-rotor condition and crashed short of its intended landing zone. (4) During high altitude training, aircraft crashed into a mountain, resulting in four fatalities. (5) While conducting a day, cross-country ferry flight through mountainous terrain, the rotor drooped and the aircraft settled into trees. (6) When power was applied to stop a descent, the main rotor RPM drooped and the aircraft descended into rocky terrain. (7) Aircraft was conducting combat maneuvering type flight maneuvers during an incentive ride when it crashed, resulting in six fatalities.
- **Materiel failure.** There was one suspected materiel failure mishap resulting in two fatalities. The aircraft was conducting a vertical take-off when it developed an uncommanded left spin followed by a hard landing. Exact cause of the uncommanded spin could not be determined.
- **Ground taxi/personnel injury.** Nine incidents of aircraft ground taxi mishaps or personal injury to passengers occurred. In the four ground taxi mishaps, two involved UH-60's striking barriers and two involved rotor meshing between taxiing aircraft. On the flight-related/personal injury side, one fatality occurred when a soldier exited the aircraft at approximately 30' above ground level during a night time landing in dust conditions. There were three incidents of personnel being struck by main rotor blades during night time pax operations in uneven terrain. One fatality occurred when a soldier on the ground was struck by a falling tree branch apparently knocked loose by rotor wash.
- **Wire/object/tree strike.** Five mishaps involved aircraft striking an object. (1) During NVG fast rope insertion training the main rotor blades struck the ship's exhaust stack resulting in one fatality. (2) During NVG approach to a FOB the main rotor blades contacted a concrete

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barrier wall. (3) During take-off, the main rotor system came in contact with a power line and a utility pole. (4) One tree strike occurred during confined area training. (5) A tether cable to an aerostat was struck and severed.

- **Dust/low illum/hard landing.** Four mishaps were attributed to dust/low contrast conditions. (1) During NVG assault mission in low contrast conditions and zero illumination, the aircraft impacted the ground, resulting in four fatalities. (2) During NVG approach to unimproved desert LZ the aircraft impacted the ground and rolled resulting in one fatality. (3) Aircraft experienced dust during NVG take-off and crashed. (4) During NVG dust landing, the right main landing gear contacted the ground. The aircraft rolled to the right coming to rest inverted.
- **IIMC/orientation.** Four accidents occurred due to IIMC, spatial disorientation or failure to maintain orientation. (1) During NVG MEDEVAC mission in marginal weather, the crew failed to maintain orientation and the aircraft crashed with four fatalities. (2) While conducting a civilian search and rescue mission on a mountainous glacier, the aircraft descended and impacted the terrain. (3) While conducting a night IMC approach, the aircraft developed a high descent rate and impacted the ground, resulting in three fatalities. (4) After encountering IIMC conditions the aircraft descended and impacted the ground, resulting in one fatality.
- **Additional/unknown.** One aircraft was destroyed by fire caused by a fuel leak during a start sequence. During phase inspection, the cross-feed fuel line nut to the #2 fuel cross-feed breakaway valve was not properly installed, resulting in the leak. Additionally, one aircraft crashed while conducting a passenger drop-off in a non-standard HLZ. Cause of the accident has not yet been reported.

	Blackhawk CLASS A – C Mishaps			
FY	Class A	Class B	Class C	Fatal
2008	5	7	29	6
2009	10	8	21	7
2010	8	2	16	20
2011	2	4	25	0
2012	6	4	25	6
Total	31	25	116	39

"I'm Inadvertent IMC" Feb 94 Flightfax

Few phrases elicit as much instant anxiety to Army rotary wing aviators as do those three words. Regardless of the aviator's status – master aviator, instructor pilot, instrument flight examiner, commander, or newbie – accidently bumping into a cloud presents many problems not typically encountered during a planned instrument flight rules (IFR) flight.

An analysis of inadvertent IMC-related accidents over the last 20 years provides some insight into the significance of these accidents. From January 1974 through January 1994, the Army experienced 50 Class A through Class C rotary wing accidents involving inadvertent IMC. Of these 50 accidents, 40 (80 percent) were Class As. In the three Class B accidents, the aircraft sustained substantial damage but fortunately only two crewmembers were injured. Of the seven Class C accidents, four were sling load operations where the aircrews released the load after encountering IMC in order to maintain aircraft control. Of the remaining three accidents, one involved an overtorque, one involved hail damage during the recovery, and one involved an engine failure while on vectors for an instrument approach.

UH-1 and OH-58 crews experienced most of the accidents with 17 each. Of the 50 Class A through C accidents, 36 (72 percent) were at night. Of the 14 day IMC accidents, 10 occurred in mountainous terrain. The accidents occurred when the aircraft encountered clouds at flight level, flew into ground fog, or flew into heavy rain.

What can be done to eliminate this type of accident? The solution probably requires action at several levels – individual aviator, instructor pilot/instrument flight examiner, and commander.

Individual aviators should –

- Maintain "very good" instrument flight proficiency instead of minimal proficiency.
- Practice instrument flight until they are very confident in their abilities.
- Be familiar with and practice local inadvertent IMC procedures. Commit to memory altitudes, headings for procedures, ATC frequencies, and NAVAID frequencies and identifiers. Back it up with an approach plate.
- Realize when accomplishing the hazard assessments that combinations of hazards may increase risk beyond the sum of individual hazards.
- Avoid routes over areas of low contrast and definition, particularly at night.
- Do not continue flight purely on aided-flight visibility during night-aided flight with either NVGs or night vision systems. During any given flight, periodically evaluate unaided visibility. If restrictions to visibility deteriorate below the required minimums, make a weather decision; don't just continue.
- Maintain situational awareness while in flight, particularly regarding flight visibility and ceilings.
- Be willing to turn around when the weather begins to deteriorate.
- Be willing to land the aircraft and wait the weather out if turning around doesn't resolve the problem!
- Do not push the weather in mountainous terrain. There is no guarantee the weather on the other side of a pass will improve.
- Have NAVAIDs tuned to navigation radios as opposed to commercial radios.

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- *Never attempt to reestablish VMC if you bump into a cloud.* ***Commit to IMC!*** This is probably the most important prevention measure/technique. You have been trained to accomplish a recovery. Execute!

Instructors/instrument flight examiners should –

- Conduct instrument training in the aircraft at night. This forces good cockpit organization and eliminates peripheral visual cues that may help aviators retain orientation with other than the flight instruments.
- Initiate instrument renewals using inadvertent IMC scenarios, particularly in observation and attack aircraft.
- Require proficiency in full approaches, as well as vectors to final.
- Exercise the local IIMC procedures. Aviators and controllers get the benefit of the training.
- Make instrument evaluations challenging but realistic. Promote aviator confidence. The old "instrument checkrides from hell" aren't very useful in developing aviator confidence.
- Teach aviators and nonrated crewmembers to make flight-visibility estimates; for example, what is the difference between 1/2-mile and 1-mile visibility?
- Reinforce good crew coordination and crew interaction.
- Ensure that if aerial observers are assigned, they are included in instrument training per the ATM.

Commanders should –

- Require aviators to fly hooded training scenarios at night.
- Ensure the risk-assessment matrix shows the proper risk for crew experience and crew mix. For example, the assessment should show that an NVG, marginal VFR, single-pilot mission with an aerial observer on board is an extremely high risk.
- Include instrument training as part of training scenarios when possible. That is, at the end of a unit METL training session, plan to have some or all aircraft recover with an instrument approach.
- Never send aircraft out on "weather checks."
- Require crews to brief specific responsibilities when weather is marginal.
- Do not demean aviators who identify weather below minimums.
- Evaluate aviator experience. Does the local weather criteria match the experience level of the unit's crewmembers? If it doesn't, consider increasing ceiling and visibility requirements for all night missions. Be a good example. If you push weather, you set the standard for every other aviator to also take chances with the weather.
- Maintain "very good" instrument proficiency instead of minimal proficiency.

As previously stated, the majority of the IIMC accidents occur at night. Over the years, the amount of night/night vision devices as a percentage of our total flying hour program has increased and appears to continue to rise. As night operations increase, we as an aviation community must continually do all we can to reduce these deadly and costly accidents.

From the February 1994 Flightfax – (POC was CW5 Robert A. Brooks, Aviation Branch, USASC)

'Flying the airplane is more important than radioing your plight to a person on the ground incapable of understanding or doing anything about it...'
- Emergency Checklist-

About the Weather

Ask yourself: Even if it's *legal* to go, how *prudent* is it?

What happens if it's right at the limit – just good enough to take off? What if you do take off and then it *turns* to soup 15 minutes into the mission? What are you going to do now? Can you land where you are and wait it out? What are you going to do if you can't?

What if it gets so bad that you decide to turn around, and there **ain't no turning around** – you bump into the clouds? What are you going to do now? Do you have a plan? Do you have enough fuel? Are you prepared to deal with IMC?

Ask yourself: Am I truly prepared to deal with IMC?

Do you have excellent proficiency? Are you totally prepared? Do you have a plan that you've coordinated with the rest of the aircrew? Have you briefed it? Is the aircraft properly equipped? Do you have navaids and instrument approaches available? Do you have a coordinated plan to reduce the effects of spatial disorientation should it strike you or another crewmember in inadvertent IMC?

Ask yourself: How bad does it have to get before I say no?

If you are routinely flying in the worst weather that's legal to fly in, it's only a matter of time until you find yourself inadvertently IMC. And if you're not ready – not fully prepared – this could be where the statistics catch up with you and you have an accident. And please remember that accidents resulting from inadvertent IMC situations are ***very rarely*** minor accidents.

Ask yourself: Is *this* mission worth doing in *this* weather?

Maybe your unit should establish some weather criteria of its own. How much experience does the unit have? Are you a bunch of old-timers who've got a lot of IFR time and are well prepared to deal with IMC? Or are most of you rookies who haven't been inside a cloud since you were with your IP in flight school? Or are you somewhere in between? Maybe you should have different minimums that consider not just crew experience but mission criticality as well. And what if you establish ahead of time the level at which go-no-go decisions are made – that if the weather is here, then the decision must be made at this level. In other words, what if you elevate the decision to a level that's consistent with the level of risk?

Sound familiar? Good! That's basic risk management.

And basic good sense.

Selected Aircraft Mishap Briefs

Information based on Preliminary reports of aircraft mishaps reported in October 2012.

Cargo helicopters

CH-47 

-D series. Aircraft contacted security tower during landing attempt in dust conditions. Aircraft forward rotor system and tower sustained significant damage. (Class A)

Utility helicopters

HH-60 

-M Series. Aircraft contacted vegetation with the main rotor blades during operations on the HLZ. All 4 MR tip caps required replacement. (Class C)

Attack helicopters

AH-64D 

-Crew experienced a low-rotor warning as they were repositioning on the taxiway for incoming aircraft while performing a 'HIT' check. (Class C)

Observation helicopters

OH-58D 

-Aircraft experienced an NP over-speed (126% / 7sec) during FADEC training. Engine replaced. (Class C)

Unmanned Aircraft Systems

MQ-1C 

-UA experienced engine oil/coolant and gearbox over-temp and FADEC FAIL indications during flight. Crew attempted to land to the runway and experienced engine failure. System impacted just off the runway. (Class A)

MQ-5B 

-System experienced an arresting hook failure during landing sequence and was subsequently returned to flight mode to expend fuel per 'hook-up' landing procedures. Upon touchdown beyond the approach angle, with decreased airspeed, the system veered off the runway and crashed. (Class C)

-System successfully caught the initial right-hand arresting cable during touchdown for landing, after which it veered right and struck the 2nd arresting gear. The right-main landing gear was sheared off and the aircraft skidded to a stop. (Class C)

RQ-7B 

Crew experienced an engine RPM/temperature spike during flight. During emergency landing, the system experienced an engine failure and crashed on the FOB. (Class C)

U.S. ARMY COMBAT READINESS/SAFETY CENTER

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