EMAIL LETTERS, MESSAGES, AND SUBMISSIONS

From the Public

For the NTSB Helicopter EMS Public Hearing Docket

(All entries extracted from the HEMS@NTSB.GOV site)

-----Original Message-----
From: Bjorn, Pret [redacted]
Sent: Tuesday, F[redacted] M
To: Trauma & Critical Care mailing list
Cc: HEMS
Subject: RE: NTSB to Issue Helicopter EMS Safety Recommendations

I'm not seeing any recommendation of even the most rudimentary triage and activation (case selection) criteria.

Preventable injuries and deaths are bad enough, I'll grant; but is no one (beyond those who pay the bills) interested that a significant number of these fatalities did not suffer time-sensitive or otherwise critical medical issues? Such is not merely a punctuation of the tragedy; it's a conspicuous symptom of an inadequately controlled and inefficient system.

Licensed air medical operations should be required to demonstrate medical necessity to an external oversight process. Such a simple amplification of accountability -- at all levels -- would save more lives than any on-board gizmo. Indeed, it would refine and enhance all aspects of the air medical system.

Pret Bjorn, RN
Bangor, ME USA

From: dorsey SALERNO-[redacted]
Sent: Monday, February- [redacted]
To: HEMS
Cc: stepanie.matonek@ntsb.gov
Subject: Fw: Perils of helicopter rescue from Dr. Salerno

At the suggestion of Mr. Robert Sumwalt of the NTSB I am submitting my written comments re: HEMS operations in order that they become part of the Committee's official records. Thank you. Robert A. Salerno, M.D. F.A.C.S.

--- On **Thu, 2/5/09, dorsey SALERNO** [redacted] wrote:
From: dorsey SALERNO [redacted]
Subject: Perils of helicopter rescue from Dr. Salerno
To: stephanie.matonek@ntsb.guv
Date: Thursday, February 5, 2009, 1:39 PM

Dear Mr. Sumwalt:

I am writing to comment on the NYT article of Tuesday, Feb. 3 regarding the increase in medical helicopter crashes. I speak from nearly 50 years of serving on hospital- based ambulances and being an Emergency Room Attending Surgeon in New York City hospitals (Columbia Presbyterian and Harlem Hospital) and in suburban Northern Westchester Hospital.

In most vehicular accidents the police may be the first responders. In general, police are not trained to assess the seriousness of injuries or to treat them. Ideally an EMT via ground ambulance would arrive within minutes. The EMT can quickly assure adequate airway, start an IV, stop bleeding and immobilize bones, neck and so forth. Then ground ambulance transport to the nearest ER is by far safer than helicopter transport. Clearly, if the EMT feels that time is of the essence to save a life, then the helicopter should be used. However, the family members or the lesser injured should not ride in the helicopter. This would only add to the overall flight risk.

In Vietnam the helicopter saved countless lives -- quick pickup of the wounded under enemy fire; emergency care on board and quick return to base hospital. The war scenario does not automatically transfer to urban situations.

My hope is that triaging at the scene and limiting who rides in the helicopter receive more attention than flight technology improvements or business considerations. I thank you and the NTSB for the work you are doing.

Sincerely yours,

Robert A. Salerno, M.D., F.A.C.S.

From: Mike Gartland [mailto:mgartland@mdsp.org]
Sent: Friday, February 13, 2009 7:11 AM
To: - -
Cc: -
Sub- - -

To Whom It May Concern:

I attended two of the four days of the Public Hearing on HEMS operations. I was very disappointed that someone from the Public Service spectrum was not invited as a witness. On the last day I had the impression, along with others in the audience that Public Service Operators do whatever they want. Although some the questions did not specifically name the Maryland State Police, most knew who they were talking about. For the record, I would like to state the following:

The Maryland State Police operates under Part 91 regulations with the exception of Search and Rescue, Law Enforcement, and Homeland Security. Our aircraft have Standard Airworthy Certificates.

Pilot training consists of Factory Ground School and approximately 30 to 40 hours of training, in the aircraft, prior to a new pilot taking his evaluation rides. These consist of an instrument evaluation, according to the standards stated in the Instrument PTS, and an evaluation, consisting of normal procedures, emergency procedures, which include an inadvertent IMC recovery, an open book test, a closed book test, a limitations test, and an extensive oral.

Recurrent training consisted of instructors flying with each pilot every quarter. Each pilot received two Instrument Proficiency Checks and an Annual Evaluation. We required each pilot to conduct a minimum of 6 VFR instrument approaches every six months and also required them obtain 6 instrument approaches, with a view limiting device, with a safety pilot. Prior to our accident, due to aircraft times (major maintenance inspections) we reduced the amount of training time. Training consisted of two IPC check rides, an Annual Evaluation, and a training session. However, if a pilot requested training for any reason, instrument or emergency procedures, they received it without hesitation. Post crash we have gone back to our original training plan.

When it comes to training, we do more than any Part 135 operator. I was the president (owner) of Freedom Air, Inc, and had several helicopters on a Part 135 Certificate. I have worked for several Part 135 Operators as a pilot, instructor pilot, Chief Pilot and check airman. I know how much training a new pilot receives and it does not compare with the training received from the Maryland State Police. When working for a Part 135 operator my annual check ride consisted of one maneuver for training and one maneuver for the check ride. I am also aware as to how Part 135 operators write up discrepancies, on a 3 X 5 card, so the aircraft is not down.

As far as oversight is concerned, the Maryland State Police have a FAA Part 145 Repair Station. I am a Designated Pilot Examiner and receive a check ride from the FAA every year in multiple helicopters, including the Dauphin. I have no problem failing a pilot if he does not meet standards, whether it is an evaluation for the Maryland State Police or a new pilot getting a check ride for his ratings. I am an industry check airman for FAA Headquarters and I have been a DPE since 1992. I and others have been ramped checked on several occasions while operating the Maryland State Police Dauphin.

Before leaving on Friday, I asked one of the NTSB panel members why no one from the Public Service spectrum was invited to be a witness. He advised that Maryland State Police were considered as witnesses, but since the accident, we thought that it would not be appropriate and that we did not have enough time, considering all of the other witnesses. However, I noticed that another operator, which had an unfortunate accident approximately one week after the MSP accident, was part of the panel. I noticed that a number of witnesses were employed by that Part 135 operator. I also noticed that FAA personnel that were witnesses were from the FAA Region and FSDO that had oversight on that Part 135 Operator.

I lost some very good and close friends in the accident on September 27. I feel that I owe it to them to write this response. The Maryland State Police, by statistics, still have an excellent safety record.

HEMS operators do not belong under Part 135 Regulations. They need unique FAA Regulations for the missions that they do.

Would being Part 135 make us safer?

Respectfully submitted,

Michael S. Gartland

Chief Pilot
Maryland State Police
Aviation Command
---------- (Mobile)
---------- (MSP Mobile)
---------- (Office)

---Original Message-----
From: Public Comment - Web
Sent: Wednesday, February 11, 2009 9:43 AM
To: Ward Lorenda
Subject: FW: Public Correspondence

fyi

-----Original Message-----
From: publicmail@ntsb.gov [mailto:publicmail@ntsb.gov]
Sent: Tuesday, February 03, 2009 10:33 PM
To: Public Comment - Web
Subject: Public Correspondence

The following request was received from the NTSB web site:
Joseph Barus
4302 Windflower Way
Madison WI 53711

608-271-3213
USA
aviation

Message:
Hello,

I appologize if this is a misplaced comment, but this was the only response section I could find to send my comments. I hope my comments can be reviewed and routed to the correct people.

I saw a news report about the investigation of Med Flight accidents this evening. As a nurse who worked at the UW Hospital in Madison WI for 12 years, I saw first hand the reason why the UW Med Flight crashed. The pressure to fly in conditions that are not safe has increased. Years ago, the choppers didnt fly in inclement weather, and now they do...and as a result, they crash. While technology may have improved the computers on board, it still has not changed the mechanics of flight. A smart computer has no effect on blades and roters.

The pressure to fly has increased from the demands of administrators that see Med Flight as a cash cow. It has also increased from the demands of a medical and lay community that expects rapid transport for medical conditions that could be met just as well by ground transport. Your report will spend alot of time and money to tell you what Im saying here. The more flights you put in the air, the more statistically there will be crashes. And when you have the pressure to fly in bad weather, it will contiue to result in crashes.

The best way to fix this problem is to limit the flights Med Choppers make in bad weather. There has to be clear national guidelines for the pilots, and re-training if needed so all pilots are on the same page. Pilots have to have the support of the NTSB to protect themselves from administrators that push unsafe flights. And of course, any safety equpiment that can be used should be. Compared to the millions of dollars hospitals spend on medical technology, they need to invest in the aviation safety of the helicopters used for emergency transport, and they need to be held accountable for doing so.

The moto, "save the rescuer" has to become a standard. Sometimes saving the rescuer means the victim will die, but if the rescuer dies, the future victims he would have saved will not be saved.

Thank you for you efforts to make Med Flights safer, I wish you the best of success to keep my colleagues alive.

Joseph Barus, RN, BSN.

- THIS IS A COMMENT FOR REVIEW ONLY -

From: Webb, Bruce [mailto:Bruce.Webb@eurocopterusa.com]
Sent: Monday, February 09, 2009 3:43 PM
To: HEMS
Cc: del.livingston@mailhost.eurocopterusa.com; Lindsay Cunningham; joe.syslo@eurocopterusa.com; Price Ron
Subject: HEMS Safety Improvement Ideas

I would like to submit the following ideas for consideration / discussion as the NTSB and FAA move forward to improve HEMS:

- **I believe that any off airport GPS approach (Hospital) must also have fuel on-site.** The vast majority of HEMS helicopters do not carry enough fuel to be capable of flying two legs IMC without refueling. Thus they need to be refueled at the sending hospital. My experience is that we fly to the sending hospital IFR/IMC and drop the medical crew to obtain the patient. The helicopter flies VFR to the nearest airport to refuel and return to the sending hospital prepared to depart IFR/IMC to the receiving hospital. Obviously, the problem is that the flight to pick-up fuel is conducted in the same weather which necessitated the IFR flight to begin with... This practice is unsafe and must be stopped. The sending hospital should have a permanent fuel facility or provisions with a local Fixed Based Operator (FBO) to reposition a fuel truck to the hospital when such an IFR HEMS flight is to occur at their facility.

- **I believe that we must amend the part 91 and part 135 VFR and IFR weather minima.** Currently a helicopter pilot may fly Part 91 in uncontrolled airspace simply by remaining clear of clouds. Yet to file Part 91 IFR to a destination airport in a helicopter, that same pilot must have a minimum of a 1000' ceiling with 2 miles of visibility at ETA plus 1 hour or file an alternate airport. Part 135 is similar...the VFR pilot may fly in a 300' ceiling with 1 mile of visibility at night and a 300' ceiling and 1/2 mile visibility during the day. Yet to file IFR under

Part 135 that pilot needs at least a ceiling of 2000' and 3 miles of visibility 1 hour before to 1 hour after ETA or file for an alternate airport. Most helicopters do not have the range to file for, and fly to, an alternate airport when the weather is poor. We must change these minima in order to make any real change in the accident rate in the HEMS industry! I suggest that part 135 VFR minima should be 800' ceiling with 2 miles of visibility during the day and 1500' ceiling and 3 miles of visibility during the night. I would also suggest the the IFR minima before requiring an alternate airport be reduced as well to encourage safe IFR flight. I believe the minima may need to be on a graduated scale depending upon the helicopters equipment/capability and the flight crews training. I suggest that a properly trained flight crew (Pilot) operating a modern, Technically Advanced Aircraft (TAA); the minima should be a ceiling of 300' above the approach to be flown, or 500', whichever is higher and a visibility of 1/2 mile (But never lower than the minimum visibility of the approach to be flown).

- **I believe that Part 135.351 must be amended.**
  Training must be accomplished as it was intended, not circumvented. The loophole in paragraph (c) which specifies that a check ride may be substituted in lieu of training must be eliminated. This loophole is the HEMS industries dirty little secret. Although operators may say that this is not often done...my experience, and industry query tells me that it is often done. We must require training! And said training must be accomplished!

- **I believe that we must require training.**
  Technology allows us to move from task based training to scenario based training. We must use scenario based training whenever / wherever possible. Simulators are a phenomenal solution to conduct said training. The airline industry has taken advantage of simulators and scenario based training to reduce their accident rate; let's not reinvent the wheel, but instead copy what works. Helicopter simulators are now of the quality and cost necessary for widespread implementation. Certainly we still need excellent aircraft specific training. As importantly we must

have excellent Inadvertent Instrument Meteorological Conditions (IIMC) avoidance and recovery training for VFR pilots and advanced Instrument Flight Rules (IFR) flight training for IFR crews! We must also provide initial and recurrent training for all specialty equipment utilized...such as Night Vision Goggles (NVG's). The entirety of this training must be comprehensive, scenario based, and occur on a regular basis. I recommend quarterly training...no less often than semiannually.

- **Wide Area Augmentation System (WAAS)** This technology allows for standalone precision navigation and is extremely valuable to helicopter IFR operations. As such, the national airspace system regulations and operating procedures must keep pace with the capabilities enjoyed by such technology. We need a very low route structure developed for helicopter WAAS operations.

- **Simple Observations: 1)** During my career as an HEMS pilot I always considered the medical crew as my customer; the patient was their customer. Thus my responsibility was always to keep the crew safe...regardless of who the patient was, or their medical condition. **2)** For many years the HEMS industry enjoyed (took advantage of) the flight training conducted by the military. Years ago most of the HEMS pilots were also in the Guard or Reserves...this is where they received good IFR training. Today this is not the case. **3)** I've observed that most VFR helicopter pilots flying in the HEMS industry with instrument ratings have <u>little to no real IFR experience</u>. In fact most of these pilots have never been in a cloud. So when they "scud run" and ultimately find themselves IMC they will not climb to safety...they will descend and/or turn...often to their deaths. **4)** Current IIMC training conducted in an actual helicopter cannot compare with the training which is possible with a good simulator. In a simulator we can actually allow the student to fly the procedure to fruition...what ever the outcome may be. While in an actual ship the training must all be conducted VMC and a negative outcome must not be allowed to occur. **5)** It is remarkable to me that a Part

135 PIC may have his/her first actual IMC experience during a patient flight. Part 135.243(c) "Pilot in Command Qualifications" should require a minimum number of hours of actual IMC...I would propose 5 as an absolute minimum...much more would desirable. **6)** Certainly the solution(s) to improve the HEMS accident rate involves multiple initiatives. We must amend the regulations to encourage IFR flight and to discourage VFR flight into marginal VFR or IFR conditions. We must mandate effective real world training; scenario based simulator training has proven to be successful in the airline industry. We must leverage new technology where it makes sense, NVG's, HTAWS, WAAS, etc. We must ensure that each initiative is carried out as intended; proper oversight is necessary, as each layer depends upon the others to be effective. **7)** The basic training requirements contained within part 61 are outdated and inadequate. In the fixed wing world a pilot must receive additional training and/or obtain an additional certificate to fly a turbojet powered airplane, to fly a complex airplane, an airplane with a tailwheel, or to fly a multi-engine airplane. However, in the helicopter world no such additional training / certificates are required. A pilot certificated to fly a light single engine piston helicopter (R-22) is also certificated to fly a very complex twin engine turbine helicopter (EC155). This seems unreasonable to me. **8)** *Our industry is ripe for change. We have operated much too long with outdated regulations, inadequate training, and incomplete oversight! These hearings are a great beginning...*

Please contact me if I may be of any assistance!

Respectfully submitted,

Bruce A. Webb
Commercial Helicopter Pilot
Certified Flight Instructor / Instrument Instructor

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380 Creek Bend Drive
Aledo, Texas 76008

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From: john hartman
Sent: Monday, Febru-
To: HEMS
Subject: 2 pilot program is key

The air carriers never go single pilot! Hence, they have a good safety record, but they don't rescue people out of the trees. Still, you cannot argue against the overwhelming effect of having 2 pilots unless you bring up the cost, weight limitations, or the devastating affect it will have on some operators. The issue is lives, not specific businesses, besides to thin out the industry means more flights for someone.

I've always said that the biggest problem in aviation is: **Egos and politics**. I do not mean governmental politics. I mean the lowest level of politics in small groups. This would get too psychologically deep and hard to describe without lengthy examples, so I'll launch to my point, leaving out the management levels, starting at the line pilot level.

Pilots from single pilot programs like to be single pilot, mostly, because there's no peer pressure. Their ego would explode if another pilot were there to second guess them. You want a humble pilot who's willing to accept ideas from outside sources, not the ego jockey who's right just because he is and is able to make snap quick decisions all by himself.

There are pilots that can manage very well in the single pilot environment, but you are playing with probability. If you claim that you can train a single pilot to be perfectly safe, it may be true some of the time, but there is a 100% probability of finding a pilot somewhere that can't be trained. They will always be there somewhere. You may think that a faulty pilot should be revealed with regular evaluations. But **the problem is a deep personality issue, not his ability to fly the aircraft**. This is a subtle thing that takes time to catch. A single pilot has no one watching him. When a single pilot program hires a pilot there is an orientation period. This could be 1 week, or 3 months. After the short orientation period, he's set out on his own. There's not much time spent getting to know his habits, because the aim is set to orient and fill the spot, so bad pilots get through the system.

Some of the bad habits might be: A hero mode, infallibility or overconfidence, lack of respect for limitations, resignation, substance abuse, anger, ignorance or misunderstanding of some key rule or concept, etc.

A 2 pilot program hires a pilot as a Second-In-Command. He is trained to fly with a Pilot-In-Command who is trained to fly cooperatively. This can go on from 1 year to 10 years before the SIC is promoted to PIC. Through crew mixing and PIC

recommendations for promoting SICs, the wild card pilot is inherently identified and not promoted.

The peer pressure in 2 pilot programs is a sort of "Big Brother" effect. If a PIC develops a tendency to try dangerous things, the SICs presence will certainly make him think twice before doing it. In the long run, this system forces a pilot to face his own deficiencies, whatever they are. With dual pilot programs and crew mixing, the pilot group inherently develops a standard for good and a stigma for bad.

The other fixes suggested to the board are not going to fix the bad pilot problem.
-IFR for me is more something to fall back on in bad weather, and I do use it rather than force a bad situation. IFR patient flights make more sense the longer they are. In most short patient flights, doing it IFR is not much of a time advantage over ground transport when you consider the logistics involved in doing it IFR. It involves transportation to and from the airport, and when you consider the time that all of this might take, it might have been better to go all ground initially. We carry a doctor on board the aircraft, which complicates this issue for our program, because it might be better to get the doctor there for the ground transport. For the most part, proponents for IFR patient flights don't consider the time that they may be wasting for the patient and don't consider that a ground option might be better time wise with a higher probability of reaching the destination without complications. But the ability to accept defeat and go home IFR in bad weather has value. The use of IFR approaches directly into hospitals is outside of my experience.
-Night vision goggles are what they are. You can see into the night. Towers and wires can't hide in the dark anymore. But these are training intensive and can allow you to get deeper into a corner with bad weather. A night sun is effective too.
-Programs that shop for weather don't create a new problem, they only increase the chance of finding an existing problem (the bad pilot).
-Terrain awareness technology is outside of my experience.
-A communications office can add to the "Big Brother" effect.
-Cockpit data recorders seem posthumous, but definitely hold promise for future ideas.
-Raising weather minimums is not going to fix a pilot who will bust them.
-Training was covered above. Training is second on my list after dual pilot. As for training being able to fix the HEMES problem, you can't train away a bad personality, because they are too subtle.
-Egos and politics are still a factor in how a program is run, but the basic problem is the line pilot personality.

John Hartman, PIC
Cleveland Metro Life Flight
EraMED

From: Jimmy Poulson - - - - - -
Sent: Saturday, Febru- - - -
To: HEMS
Subject: HEMES suggestion from a 31 yr pilot

Dear Sirs:
The mandate of the additional equipment may be good for the pilot that has already gotten into a bad situation, however the object should be to not get into that situation to begin with.
The judgement call to take a flight that is "just" within minimums may or may not be trained in to some extent. The only way I can see giving the pilot the additional margin is to increase weather minimums to a point that the pilot has room for error or changing weather conditions. For example 1500' and 7 miles at night(or higher) Maybe even a "No less than 4 degree temp/dew point spread. I know it seems a little high. But that is where the margin of error or changing weather conditions comes in.
In addition harsh penalties for violating the minimums for both the pilot and more so for the operator. There are companies that put pressure (undocumentable) on the pilots to accept a flight (flight numbers game), or crew pressures. These are not so easy for a new pilot to overcome. Therefore harsh penalties for the pilot as well as the operator. It should be on the order of $100,000 for the operators and 30 day suspension and re-train for the pilots.
Prevention not recovery ---------- -------
---------- ----------or E-mail

-
I have learned a few things in 31 years as a helicopter pilot (21,000 hrs in 13 models of helicopters)
NOT getting into a situation requiring the use of the latest equipment and all of my skills to **not die**, is my first choice.
Thanks and good luck with your efforts to improve our safety.
Jimmy Poulson ,Com cert ------ -- ---

From: Robert Cross [redacted]
Sent: Friday, Februa-
To: HEMS
Subject: Helicopter EMS Safety (ARFF firefighter's View)
Importance: High

Dear Board members - Thank you for the opportunity to comment on the very important topic of Helicopter Safety EMS. As both a professional airport fire officer and an instructor, I have seen some problem areas. I will attempt to highlight these and suggest some possible solutions. We are very fortunate to have central Pennsylvania covered by a very good HEMS flight program. They provide an outreach program to orient emergency responders to their program and what the needs are to safely land a helicopter at a scene (rather than a fixed location established helipad). I know of two recent events where landing zone personnel have directed the aircraft into an unsafe landing zone. My understanding is that these near misses occurred at night. On the first, the landing zone officer said the landing zone was safe; but there was a crane inside the LZ (it was reported that the LZ officer was not even on scene to confirm that all was safe). Quick action by the flight crew avoided a potential disaster. The second incident was similar, in that this involved an unlit cell tower in the LZ area. There was an LZ officer on scene. Once again quick action by the pilot averted an accident. In my experience,training for aircraft accidents is not a high priority for most hospitals, volunteer and career fire departments. The opinion out there seems to be that it can't or won't happen here. That's unfortunate, good training can make the difference between a making a bad situation worse or being able to mitigate a situation rapidly and efficiently. I point to the example of the crash of United 232 at Sioux City, IA. Proper training played a major role in the outcome of this accident.

Problem - Landing zone safety:
Poor understanding by responders of "what is a safe landing zone?
Little or no training by responders in the basics of aircraft rescue fire fighting.
Unlit cell towers which could be near potential landing zones.

Solutions - Landing zone safety:
Flight programs should provide adequate safety training. This should be done by both flight personnel and ARFF trained personnel. This to

assure a good understanding about safe landing zones and to provide training on what to do if something goes wrong.
All cell towers should be lit regardless of height.

Problem - Hospital helipad safety:
There appears to be a lack of respect for the potential for accidents and incidents at most hospitals.

Solutions - Hospital helipad safety:
Assure that all flight personnel, mechanics and security (or safety) personnel receive training (in house or other sources) in how to respond to accidents and incidents.
Offer the same training to responders having jurisdiction or providing mutual aid).

Problem - Air traffic congestion near hospitals (not under control by air traffic controllers).

Solution - Establish a CTAF for HEMS to use.

Thank you for your consideration,

Captain Robert Cross
Aircraft Rescue Fire Fighting
Williamsport Regional Airport
700 Airport Rd.
Montoursville, Pa. 17754
(570)368 - 2444
Home: ----------

From: Don Morgan-
Sent: Tuesday, Feb-
To: HEMS
Subject: Helicopter EMS

Sir,
First off, thank you for addressing the HEMS safety issue. I have been involved in Search and Rescue for the last 8 years, 3 of those years as Commander of Davis County Sheriff Search & Rescue. As commander I was directly in charge of over 125 different SAR operations. Obviously helicopters were involved in many of those operations. We have 3 different organizations that we can call upon for assistance when helicopters are needed, they are Air Med (University Hospital), Life Flight (IHC Hospitals), and the Department of Public Safety also has helicopters that we can utilize. All three of these organizations are top notch, the pilots and medical crews are highly trained and professional, they are the best.
It is my understanding that you are looking to determine what additional training and guidelines could be implemented to make the industry safer, I would suggest that you also look at those agencies that are requesting the helicopters in the first place. If there were standardized guidelines for the use of helicopters that could also greatly reduce the number of accidents. My primary concern is that over the last few years whether it be law enforcement, fire, or SAR these agencies are requesting the assistance of helicopters for convenience sake and not because the victim or patient requires a helicopter evac. In the recent past I have seen several incidents where a helicopter was used because it would be "easier" or "quicker" and there was no consideration given to the increased risk to the victim or to the crew.
One incident in the last 30 days was fire had a snowshoer that had fallen and seperated their shoulder. This person was less than 1/4 mile from where the vehicles could drive to. The victim was in no immediate danger whatsoever. It was a simple case of putting him in a litter and taking it out either by snowmobile or by a crew carrying it. Because the responding fire agency did not have a suitable litter for a snow evac they called for a medical evac, even though the patient was adimant that he did not need a helicopter. The patient was flown the 1/4 mile to a parking lot and unloaded.
On another incident, a hiker was flown out with a sprained ankle, once again out of convenience because the fire agency did not want to hike and it would be much faster just to "shuttle" the victim out to a parking lot.
I have also seen what I will call "pilot shopping". On a recent event a vehicle had rolled down an embankment in a canyon, there was a possibility that a victim had been ejected and was somewhere on the hill. The debris field was approximately 20 yards wide and 60 yards long down the steep hill. There were approximately 20 personnel searching the debris path. The lead agency asked for a helicopter to hover over the area to put light on area, the first helicopter could not hover because of the tightness of the canyon walls and the wind coming down the canyon. That helicopter was released and another was called to perform the same mission that the first one denied. This put the crew and the ground teams in danger.
While our agency has made a strong commitment to evaluate how we use helicopters I believe guidelines from the NTSB could also be useful. Many agencies are abusing this tool, probably 70% of the time that a helicopter is used in our county the patient does require medical attention, they are just shuttled to parking lot. This is a waste of a resource and puts equipment and personnel in danger needlessly. This is why it is important for guidelines to be developed for those that request helicopter assistance.
Once again let me emphasize the utmost respect and admiration I have for the flight crews, fire and SAR need to learn how to use them properly.
Sincerely,
Don Morgan

From: dd write-
Sent: Wednesd-
To: HEMS
Subject: HEMS Safety

To Whom It May Concern:

Upon review of the docketed accidents and other NTSB accident reports in the air ambulance industry, there seems to be significant similarities to the problem learned in the aftermath of *Blue Star-Darby-Alpha Jet-Platinum Jet* saga (fractional ownership industry), but which the NTSB does not seem to have considered as *probable cause* or *contributing factor* in any air ambulance industry accident.

The air ambulance industry slowly over time until a relatively recent growth period. In this industry, there are many types of operators. Some are straight-out air carriers who operate their own aircraft and in their own name, such as *Life Flight of Utah* and *Air Evac Lifeteam*. Others are "*vendor*-styled programs", such as *Valley Air Care*, and *Boston Medflight*. A *Vendor*-styled air ambulance "program" is an entity other than the air carrier who is holding out as principle in *common carriage* air transportation without air carrier certificates but who uses an air carrier to accomplish their business goal. These "programs" are also sometimes know as a *traditional* program (or a *hospital based* business model).

Vendor-styled air ambulance "programs", however, seem to share many core *operational control* safety concerns that were surprisingly found to exist in the fractional ownership industry.

The best way to highlight the overall issue, however, might be to provide a single example that represents the many. Let's use *Valley Air Care* since it was one of the accident cases*:*

According to all news accounts, *'Valley Air Care'* was involved in a fatal accident earlier last year. The NTSB released a preliminary report and noted in that report that the flight was *'registered to Harlingen Community Emergency Care Foundation, Inc., doing business as Valley Air Care, and operated by Metro Aviation, Inc., as a 14 CFR Part 91 positioning flight'*. *

Consider the following:

The FAA has long held that an entity is engaged in *common carriage* air transportation if that entity 1) holds out, 2) to provide people or property, 3) for compensation or hire. The FAA has also held that under 49 U.S.C. 40102 an "air carrier" is a citizen of the U.S. undertakes directly by lease, or other arrangement, to provide air transportation. In aviation in general, one cannot hold out to be the principle business in air transportation unless one has an air carrier certificate.

But, if you examine it carefully, *vendor*-styled air ambulance providers seem to do just that!

Is Valley Air Care holding-out [YES], to carry people or property [YES], for compensations or hire [YES].

In essence, Valley Air Care is engaged in *common carriage* air transportation as a *principle* using a "vendor" air carrier under contract!

Valley Air Care is an *air carrier*, by definition, because they undertake directly [with the public] by lease, and, other arrangement [contracts with the local governments, hospitals, etc.], to engage in *air transportation* (the interstate, overseas, or foreign air transportation by aircraft). [*see* 14 CFR 1.1]

Valley Air Care *operates* its aircraft in *common carriage* because, within its contract with Metro, it uses, causes to use, or authorizes to use aircraft, for the purpose of air navigation including the piloting of aircraft, with or without the right of legal control (as owner, lessee, or otherwise). [*see* 14 CFR 1.1] Generally, as a person with delegated *operational control* authority, a Metro pilots must have authorization from *Valley Air Care* first, before he could dispatch himself in an aircraft being *operated* in the name of the *Valley Air Care* program; thus giving *Valley Air Care* a superior authority over *Metro* to use, cause to use, or authorize to use aircraft engaged in the *common carriage* air transportation under the *Valley Air Care* program name (dba).

Therefore, Valley Air Care has *operational control,* indirectly, but in a very real sense because they have the means (through its contract with Metro) to exercise its contractual authority over initiating, conducting and terminating a flight. [*see* 14 CFR 1.1] As the designated holder of Metro's operational control authority, would a pilot have been able to use an aircraft anytime he felt it appropriate, or would he *first* have to get permission from *Valley Air Care*? That would give *Valley Air Care* ultimate *operational control* authority in this *common carriage* arrangement.

Therefore, *Metro*, it seems, would be violating the regs because it has given up some of its operational control authority to *Valley Air Care* by allowing *Valley Air Care* to have the authority, by nature of their contract, to initiate, conduct or terminate a flight. [*see* 14 CFR 135.77]

Valley Air Care is the principle business in this contractual arrangement in holding out air ambulance service to the public at-large because *Metro* is simply a "vendor" (provider air services) for *Valley Air Care.*

This might *seem* appropriate if this was a *private carriage* operation, but it is not in *private carriage*. It is in *common carriage*. *Metro* might have a private contract with *Valley Air Care*, but *Valley Air Care* is turning around and using its contract so that it can hold out in *common carriage* air ambulance service itself.

Metro is apparently violating the regs because a certificate holder may **not** *operate* an aircraft under Part 121 or part 135 using a business name other than a business name appearing in the certificate holder's operations specifications. [*see* 14 CFR 119.9(a)]i[i] Certainly the aircraft are being operated in part 135 operations, however, is 'Valley Air Care' a name appearing as a dba in Metro's OPSPECS? No, not according to the record documents (A001). One look at how the aircraft is painted, in how this "program" is marketed, and in all the paperwork used in conjunction with the *'Valley Air Care'* program demonstrates that the certificate holder is *operating* aircraft as *'Valley Air Care'*. See also the NTSB report for their conclusion of the DBA name used.

Therefore, *Valley Air Care* seems to be conducting business as principals (under the business name of *Valley Air Care*) and acting as an *air carrier* engaged in *common carriage* air transportation without an air carrier certificate, operating permit, or having the economic authority to do so. And, they are using a hired 'vendor' *air carrier* to circumvent those requirements!

Elsewhere in *common carriage* commercial aviation, it has been a long standing principle that the FAR's (and U.S.C.) strictly forbid this sort of activity and business relationship, and for good reason. But, for some reason, the EMS industry apparently evolved in spite of this.

In the air ambulance industry, the reality is that the public views "*Valley Air Care*" as if "*Valley Air Care*" was the *air ambulance company*. *Metro* is simply the "*vendor*" in a contractual relationship that put *Valley Air Care* as the principle and *Metro* as *their* subordinate. *Metro* is not the true *operator* of these aircraft, *Valley Air Care* is; and *Metro* is acting as an agent of *Valley Air Care*. *Metro* may be disguised as the principle on paper, but the FAA/NTSB would have closely examine the *wet lease contract* (business contract) to get to root contributing factors. *Valley Air Care* owned the aircraft, they scheduled it to fly, they dispatched it in *their* name, and in a clear and unmistakable brandmark in which gives anyone and everyone the impression that *Valley Air Care* is the *air ambulance* provider.

As long held by the FAA, this business scheme is extremely dangerous and counter to any and all *operational control* concepts.

If they haven't already, the NTSB should study the U.S. Department of Labor case of *Evans v. Miami Valley Hospital*[ii] **[ii]** to gain a true understanding of the insidious dangers that hide themselves from FAA oversight. See how in *Evans*, there was a total and complete failure of *operational control*. See how it was determined that the air carrier in reality was deemed to be subordinate to their so-called "customer". See how the hospital's "program manager" was ultimately determined to be the equivalent of a *direct* supervisor/employer of the pilots, even though it was all disguised that she wasn't. See how the "program", with its superior contractual relationship over the air carrier, ultimately influenced the decisions to use *its* aircraft and provide service to *its* customers; and how that overrode the air carrier's ultimate responsibility and perception as to who was actually "operating" the aircraft for whom. And, see how that scheme seriously and adversely influenced the operation and safety of that air carrier in providing service to the public. Read the testimony of so-called "experts" in regard to proper Part 135 standards. See how it was revealed that the *customer* actually drove the operational tempo of the air carrier, and caused a huge break down in allegiance between the pilot (the air carrier's designated operational control tier 2 authority) and the Chief Pilot (the air carrier's designated Tier 1 authority). Ask why the "hospital" was part of the pilot's hiring interview, and actively participated in all the air carrier's pilot and safety meetings in a capacity that clearly gave the impression that the "hospital" had a huge influence in a supervisory (superior) role over the air carrier. Ask why air crewmembers and mechanics essentially became more *agents* of the "customer" than it was that the medical crewmembers were *agents* of the air carrier.

- FAR 119.9(a) *prohibits* an air carrier from operating aircraft using a business name *other* than that which is in their OPSPECS; yet, in the HEMS world, we make excuses to do it regularly.
- OPSPEC A001 authorizes an air carrier to operate aircraft using *only* those DBA's listed when in common carriage air transportation, yet, this is generally ignored.
- OPSPEC A008a.(5) *prohibits* wet lease agreements between a non-air carrier and an air carrier, yet, in the HEMS world, we *wet lease* all the time but simply call it something else to avoid the principles behind the regulations.
- OPSPEC A008b.(3) *prohibits* an air carrier from transferring its operational control to another entity regardless of contract agreements, yet, in nearly every *vendor*-styled operation, the customer is the one who holds-out to the public in *their* name, takes requests for air transportation services, and through its contract, initiates the flights and has an indirect superior authority over the air carrier's tier 2 authority (the pilot) to use the aircraft in service to the public.
- OPSPEC A008c.(1) *prohibits* the franchise of an air carrier's operational control authority to another entity, yet, in many vendor-styled operations, the air carrier lends its certificate to its customer so that the customer, using its name, can turn around and hold-out as an Air Ambulance provider to the public.
- OPSPEC A008c.(2) *prohibits* an air carrier from conducting operations for another entity in such a way that it portrays that entity as having an air carrier certificate, yet, many Air Ambulance businesses hold-out to the public as air ambulance providers only because they have contracted with *vendor* air carriers who "operate" aircraft in the name of the non-air carrier, and allow the veneer to obscure root *operational control* issues and problems.

- FAR 215.3 *requires* that an air carrier hold out to the public using only the air carrier's name and that it shall not *operate* an aircraft in a name other, but, most of this industry seems to disregard this requirement.
- FAR 135.25(d) only allows an air carrier to *operate* aircraft in *common carriage* aircraft owned by someone else provided it leased or chartered it without crew. This FAR was designed to prohibit an aircraft owner who is not an air carrier from indirectly operating an aircraft in *common carriage*, nevertheless, the air ambulance industry abound with examples where "programs" own the aircraft and staff crew (its *medical* crew).

Yet, with all the guidance and regulations to prevent such, our industry is full of examples that violate these very basic rules and principles. We have allowed an industry to grow where the "program" is really the air ambulance operator, and "vendor" air carriers are their servants. Why would a company such as *Metro* conduct business as an air ambulance operator under so many different "customers program names", if *Metro* was truly the principle air carrier? Why are helicopters painted to represent so many different entities if it is really *Metro* that is the operator?

What about ERAMed, Omni, Evergreen, PHI, etc.? In how many different representations are these companies "operating" aircraft? For instance, *how* is Vanderbilt different than Careflight? They each hold out differently. Or, Lifesaver, Flight For Life, University of Wisconson, or Lifeflight of Denver? Why are the pilots and mechanics dressed so differently at each location if the "vendor" is all the same? Who is representing who? Why do two adjacent "programs" compete against each other holding out as separate entities when it is the same air carrier? What effect does this have on an air crewmember's concept as to who ultimately controls their livelihood? Where will these "program" pilots typically end up if and when the *program* ever decides to change *its* vendor?

Safety is hugely affected in this industry because *real operational control* issues are so insidious and hidden from the FAA, that the FAA will never see them directly. As evident in *Evans*, the true problems will almost never be revealed. *Evans*, was a fluke case in that exposed the real insides of a "vendor" relationship. There are a lot of Richard Evans' in our industry that were hired, fired, disciplined, and supervised by their "customer" and who's cases you will never hear about. Deep down, pilots and mechanics know who they *really* work for and will generally hold their allegiance to those whom indirectly control their paycheck and supply their equipment in spite of what their air carrier's policies are (who are often many states away).

In closing, in *vendor*-styled accidents, the NTSB should expand the record and take a critical look at the contractual information between the "program's" *owner* and the *air carrier* to help better evaluate any *operational control* issues that may have adversely influenced the outcome.

Thank you,D. D. Write
Copperas Cove, Texas

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i[i] FAR 119.9(a) is very specific: an air carrier can only operate an aircraft in the business name of the air carrier. However, it was only subsequent to *Darby* that this industry even took note of this requirement. As a solution to keep its "customers" logo the same, the vendor styled industry began using "Operated By" stickers citing FAR 119.9(b), however, FAR 119.9(b) does not provide an exclusion that an air carrier cannot operate aircraft in a business name other than its own. The intent of FAR 119.9(b) was merely to allow the air carrier to mark and operate aircraft in another authorized dba of the air carrier.

ii[ii] *Richard Evans v. Miami Valley Hospital, et al.,* Case no. 2006-AIR-000022 (United States Department of Labor, Office of Administrative Law Judges) (August 2007).

From: -- --- ----------
To: he--------- ----
Subject: HEMS White Paper (Operational Control)
Date: Mon, 9 Mar 2009 23:22:10 -0400

A White Paper on HEMS:

To All It May Concern,

It has been just over a month since the NTSB public hearing on HEMS operations closed, and I hope everyone has had time to digest most of the testimony given during the proceedings.

The truth is, from an aviation perspective, our industry has evolved into an *operational control* mess!

Some have testified that there is a "very bright line" between the air carrier and a "program's" owner in *vendor*-styled**[*]** air ambulance services when it comes to *operational control.* But, a closer examination of the testimony and the facts should put that proclamation into serious question. *Vendor*-styled air ambulance "programs", by their very nature and definition, are *operational control* disasters! Are the "program" owner's truly the air carrier's *customer*, or are *vendor*-styled "program" owners really much more? Who is actually *holding out* as the air ambulance company and how much direct and indirect influence do *they* have over the air carrier at managing *their* "programs" (operationally)?

Boston MedFlight, LifeFlight of Maine, and Mayo Clinic all testified at the hearing and showcased *their* program in an attempt to sell everyone how *their* business model is best. They all boasted *their* company; how *they* handle and pay for training; how *they* budget for and fund the salaries; how *they* buy, pay for, and equipment *their* aircraft (NVG's, TWAS, GPS, etc.); how *they* steer the safety climate of *their* operation; how *they* bill the patient, insurance companies, and Medicare for providing air ambulance services; and, how *they* commit *themselves* to delivering air ambulance service to the communities that *they* serve. Yet, **none** of *them* are a certificated air carrier! Not a single one! And, the witnesses for these entities do represent the typical *vendor*-styled air ambulance service across the country (a.k.a., "*traditional*-based" or "*hospital*-based" business models). They have all hire a *vendor* air carrier who "**operate** aircraft on *their* behalf;" but, then all animatedly proclaim that they have severed themselves in regard to *operational control*.

Understanding the deeper "bright line" concept:

At *vendor*-styled air ambulance "programs", it is often explained that the "program" is not involved with the *operational control system,* and that the "program" is simply the

"customer" of the air carrier. But, that is a very big claim to uphold when you examine all the facts. How is it even conceivable that a "program" is not involved ("separated by a bright line") in the *operational control* aspects of *their* "program" when *that* "program" has so much invested in *that* "program", where *that* "program" is actually an independent entity of the air carrier, and where *that* "program" directly holds the licenses of the State and has the Certificates of Necessity (CONs) of the local governments to be *the* air ambulance services for that area?

At about the same time that the NTSB and FAA were dealing with *operational control* matters in the fractional ownership industry (c. 2005), there was an Administrative Law Case occurring at the U.S. Department of Labor that perfectly exampled how the *operational control system* completely broke down in the HEMS industry too. This case provides a rare but unprejudiced glimpse into how that so-called "bright line" is often crossed in the day-by-day operations and in a more realistic manner. The NTSB and FAA should study this case comprehensively as it highlights just how insidious and concealed the "customer's" influences actually are when applying *operational control* at *vendor*-styled air ambulance "programs." Like Boston MedFlight, LifeFlight of Maine, and Mayo Clinic all testified to the NTSB, the respondent Miami Valley Hospital's CareFlight "program" proclaimed to the Department of Labor Administrative Law Judge in the case of *Richard Evans v. Miami Valley Hospital**[†]*** that the hospital was not involved with the *operational control* matters of *that* "program" too. (Miami Valley Hospital is also a "program" where the hospital *owns* its aircraft and who has contracted with a *vendor* air carrier to "operate" those aircraft on *their* behalf.) The defendant/complainant in that case (the pilot) was terminated because he tried to report serious **operational control safety problems** to his air carrier, but the "hospital" (considered the by all to be the "customer") intervened. Once all the testimony and facts were finally considered, it was determined that the air carrier sacrificed the pilot to appease the "program" in order to protect its contract with the non-air carrier in the face of pure *operational control* matters. In his 55 page decision, the honorable Joseph E. Kane concluded:

Miami Valley's Hospital (MVH) Role in Complainant's Termination:

Respondent, MVH, argues that it took no part in Complainant's termination. [The Hospital's Program Director] asserts that CJ never consulted her when making their determination to terminate Complainant. [The Air Carrier's Chief Pilot] also states that it was his decision to terminate Complainant. However, MVH ignores the fact that the main reason [the Chief Pilot] decided to terminate Complainant was he believed Complainant could no longer get along with [Program Director]. She is the customer and [the Chief Pilot] had to keep her happy. During the August 25, 2005 incident, [the Program Director] told [the Chief Pilot] that this was the "last straw." (Tr. 915). She indirectly informed him that she wanted Complainant out of the [MVH's] CareFlight program. (Tr. 915). Therefore, although [the Program Director] did not make the ultimate termination decision, her opinion was a direct factor in [Chief Pilot's] decision

to terminate Complainant. [the Program Director] directly influenced CJ to terminate Complainant. [Page 45]

The evidence shows that MVH fulfills all the requirements of Fulington. [The Hospital's Program Director] was in control of Complainant's employment and she exercised it every chance she got. The contract between MVH and CJ provides that MVH must approve the pilots chosen and can have them removed. (CX 25). MVH is also responsible for paying the salary of pilots in the program. (CX 25). MVH must reimburse CJ for all costs associated with the benefits provided to pilots. (CX 25). Before a pilot's benefits or salary can be changed, MVH must agree to the amendment. MVH provides the base of operation for the CareFlight program and owns the helicopters flown by the pilots. (CX 25). CJ is responsible for maintaining the liability, and workers' compensation insurance policies, MVH must reimburse CJ for the costs. (CX 25). Furthermore, although the agreement provides that MVH is only an independent contractor and has no control over the functions of CJ's employees, MVH's actions prove otherwise. [Page 42]

[The Program Director] asserts that she neither retaliated against Complainant for raising safety concerns nor pressured him to fly unsafe aircraft. (Tr. 1120).... [The Program Director] testified that she was never Complainant's supervisor and was neither consulted regarding CJ's decision to terminate Complainant nor did she pressure CJ to fire Complainant. (Tr. 1120). [The Program Director] asserted that CJ has never consulted her concerning termination matters. (Tr. 1125). She urged that the contract provides for mutual agreement merely because of the situation with CareFlight's prior air carrier. (Tr. 1125). However, she agreed that under the contract she can request the removal of a CJ employee from the CareFlight program. (Tr. 1159). [Page 33]

CareFlight bears the overtime costs. (Tr. 848). CareFlight is responsible for paying the "costs, salary, benefits and overtime" of the pilots in the program. (Tr. 848). During Complainant's [medical] leave [of absence], [the Program Director] called [Chief Pilot] to discuss the overtime costs CareFlight was incurring due to Complainant's injury. (Tr. 850). She wanted Complainant replaced unless the situation was resolved. (Tr. 850). [Page 20]

MVH has around seven and one-half million dollars invested in each of the three helicopters it operates. (Tr. 1112). [The Program Director] testified that when an aircraft is out of service there is a potential for lives to be lost. (Tr. 1112). Therefore, she stated that, not only was it an issue for the program when Complainant failed to tell the mechanics what was wrong with the aircraft, but that it was a problem for the community. (Tr. 1113). [The Program Director] stated that when an emergency situation occurs and they are unable to send an aircraft the community wants answers. (Tr. 1113). When an aircraft is out of service, the program needs to know why and for how long. [The Program Director] needs to know when the aircraft will be available to the community; she has to figure out the staffing issues it affects; she has to notify the emergency room department; and, she needs to know whether she needs to request a back-up helicopter from[the Air Carrier]. (Tr. 1114-5). [The Program Director] urged

that the helicopters are placed out of service all the time, but that the program needs to know the reasoning. (Tr. 1116). [Pages 33/34]

Interestingly, of all the witnesses that testified at the NTSB hearing, there was not one single "Program Director" to describe their role at a *vendor*-styled "program", nor was any published "Program Director's" job description entered as an exhibit to the public record. Every *vendor*-styled "program" has a Program Director.

Who really is the pilot's "employer"?

Every pilot who works at this "program" (even today), and every pilot who works at *any vendor*-styled program knows who really (ultimately) controls their livelihood, indirectly, but in a very real sense! Often, many pilots will not raise legitimate safety concerns with their air carrier (who often sits many states away) for fear that it might be unpopular with the local "program's" managers and staff (i.e., their *customers*).

They are the pilot's *indirect* employer through their "contract" with the air carrier and every pilot knows this plain fact!

In many cases, the "vendor" will change for what ever reason, but the pilots will generally stay, to be employed by the new *vendor* should serving the same very "program." Additionally, "programs" generally have a contractual right within their contract to interview, choose, discipline, and even remove a pilot working for *them* at *their* program. From the perspective of an air carrier operating under *common carriage*, this one of the key markers of the air carrier having forfeited its *operational control* to the non-certificated entity.

Note the reference to this fact in the record of *Evans v. Miami Valley Hospital*, when it was testified that the hospital had the contractual ability to discipline and/or terminate pilots who worked at *their* program. This in not an anomaly in *vendor*-styled air ambulance "programs".

What is *operational control*?

Truthfully, it is much bigger than the superficial explanations given by the witnesses at this hearing. It is not just the mechanical procedure as to who checks the weather, and who has the final authority to accept a flight. According to FAR 1.1, "*operational control", with respect to a flight, means the exercise of authority over initiating, conducting or terminating a flight*. The key word is "authority"! And in *vendor*-styled air ambulance operations, this is where the air carrier has certainly indirectly, and most likely directly given up that authority to an entity other than itself. These other entities are not acting as "agents" of the air carrier, but rather, the air carrier is acting as a contractual subordinate (agent) to *that* entity. The "program" is the *principle* in the contractual arrangement. By contract (by *wet lease* actually), the non-certificated air carrier (i.e., the "program") has obtained the authority to *initiate*, and *conduct* the air ambulance flight using *their* business name.

49 USC §41102 defines an *air carrier* as *a citizen of the United States undertaking by any means, directly or indirectly, to provide air transportation*. It also defines a *citizen* in relevant part as *a corporation or association organized under the laws of the United States or a State.* Note that the definition of *air carrier* does not rely on whether one actually holds a certificate to *be* an air carrier, just whether one is *acting* like an air carrier. Therefore, a corporation organized under the laws of the United States is considered to *be* an *air carrier* simply if *it* undertakes, directly or indirectly, to provide air transportation regardless if has a certificate to do so or not. Further, the FAA has continually recognized that if a corporation *holds out* to *provide* air transportation, directly or indirectly, that corporation *is* defined as an *air carrier*.

49 USC §41101(a)(1) states in relevant part *that an air carrier may provide air transportation only if the air carrier holds a certificate issued under this chapter authorizing the air transportation.* [Emphasis added].

Thus, a corporation who wishes to undertake, by any means, directly or indirectly, to provide air transportation may provide air transportation only if that corporation holds a certificate issued to it in accordance with Title 49 USC §41101.

Does Boston MedFlight undertake by any means, directly or indirectly, to provide air transportation to the public? How about LifeFlight of Maine? How about Mayo Clinic? Do any of these corporations have an *air carrier* certificate? Are these corporations defined as *air carriers* under the law? Do *they* hold out as to provide air transportation to the public? What about some of the other "programs" which had accidents that helped spark these NTSB HEMS hearings? University of Wisconsin's MedFlight? Valley Air Care (South Padre Island, Texas)? Providence Medical Center's LifeFlight (Whittier, Alaska)? Etc.

Mr Judge of LifeFlight of Maine testified that he "doesn't view his 'program' as an air taxi service", but rather, a "public service". Yet, these entities are not *public* operators at all. Collecting revenues and soliciting donations as a "non-profit" consortium is all part of this business plan. *Competition* was even mentioned and argued that it detracts from their ability to operate effectively and safely. LifeFlight of Maine, Boston MedFlight, and Mayo Clinic all *charge* handsome fees and bill for the flights *they* conduct while holding out as an air ambulance provider. None are air carriers!

What is a *wet lease*?

In the HEMS industry, *wet leases* are generally occurring in one of two ways. 14 CFR §119.3 [FAR119.3] defines a *wet lease* as *any leasing arrangement whereby a person agrees to provide an entire aircraft and at least one crewmember. A wet lease does not include a code-sharing arrangement*. FAR 1.1 defines *crewmember* as *a person assigned to perform duty in an aircraft during flight time*. A medical person assigned by the "program" to duties aboard an aircraft during flight *is* a *crewmember*. Thus, according to the regulations, a *wet lease* can occur in any leasing arrangement whereby a person agrees to provide an entire aircraft and at least one medical person assigned to perform duties aboard that aircraft; or, it can occur when one agrees to provide an entire aircraft

and a least one pilot assigned to perform duties aboard that aircraft—either satisfy the regulatory definition of a *wet lease*.

Thus, a "program" (as the *lessor*) who owns its aircraft and leases it to the air carrier along with the medical crew—the flight medic and the flight nurse who are also assigned *by* the "program" to perform duties aboard that aircraft—has *wet leased* that aircraft to the air carrier (as the *lessee*). And, at the other side of this business model pendulum, in the more "traditional" application, a *wet lease* has also occurred when the air carrier (as the *lessor*) has *wet leased* an entire aircraft that it owns and along with its flight crewmember—the pilots—to the "program" (as the *lessee*). Either are *wet leases* by strict definition for these aircraft that are used in *common carriage (*versus *private carriage)* and which are regulated under FAR Part 119 (versus FAR Part 91). There has been ample testimony by the "program" officials testifying at these HEMS hearings that in some cases, the "program" owns their aircraft and provides (*wet lease*) it to the air carrier, or, that some "lease" (*wet lease*) their aircraft from the air carrier. Boston MedFlight, for instance, does both to run *its* air ambulance "program".

There would be few who would dispute the basic tenet that a person cannot engage in *common carriage* (Part 135 or Part 121) operations if he was not authorized to do so. This is a fundamental principle supported by numerous citations. But, FAR 119.53 further states in relevant part that a certificate holder (e.g., "a certificated air carrier") may not *wet lease* (an entire aircraft and any crewmember assigned to perform duty in that aircraft during flight) *from* any person not authorized to engage in *common carriage*. Additionally, FAR 135.25(d) states in relevant part that *an air carrier may [only] operate in common carriage … a civil aircraft which is leased or chartered to it without crew*. Thus, by regulation, an air carrier cannot **operate** an aircraft in *common carriage* that is not leased to it; and the lease must be a *dry lease*, free from any obligations by the lessor requiring it to be operated with *their* crewmember assigned aboard or under a *doing-business-for* (*doing-business-as)* scheme for the lessor.

Does Boston MedFlight own its own aircraft? According to their testimony, "yes", they own all three helicopters and hired ("contracted with") a *vendor* to **operate** those aircraft on *their* behalf, and *they* "lease" *their* fixed-wing aircraft from another *vendor* who also **operates** that aircraft on *their* behalf and in *their* business name (dba). Does either of Boston MedFlight's "*vendor*" air carrier's use (operate) those aircraft in *common carriage* with Boston MedFlight's medical crew assigned to duty aboard the aircraft in flight? **Yes**, according to their testimony, that is what 75% of Boston MedFlight's business is *primarily* about. Did Boston MedFlight *wet lease* to or from either air carrier the aircraft Boston MedFlight is using to further *their* business? According to their testimony and the regulations, **yes**. How about LifeFlight of Maine? How about Mayo Clinic?

Who is actually *operating* these aircraft in air transportation*?*

As defined in FAR 1.1 Operate, with respect to aircraft, means to *use, cause to use or authorize to use aircraft, for the purpose (except as provided in §91.13 of this chapter) of air navigation including the piloting of aircraft, with or without the right of legal control* (as owner, lessee, or otherwise). With regard to *vendor*-styled contracts, *who* is the principle business holding out air ambulance services? All three *vendor*-styled programs

represented at the NTSB hearing clearly testified that *they* "hired" and use *vendor* in *their* air ambulance services. They testified that *they* hold the state and local licenses, and that *their* programs are accredited in *their* name. The *vendor* is simply a contractual provider of air services so that the "program" can conduct business as an air ambulance. Thus, by contract, the air carrier serves not as *principles*, but as *agents* of the "program". Therefore, through their contract with the *vendor*, with respect to aircraft, the "programs" are the *principles* using, causing to use, and authorizing the use of aircraft for the purpose of air navigation. The air carrier is under contract to fly aircraft under the contractual *authority* of the program in *common carriage*. As Susan Wetzel testified in Panel 2: *"We own all three of our helicopters and we have a Part 135 vendor that operates them on our behalf, and on our fixed-wing side, we lease that aircraft and we have another Part 135 vendor that operates on our behalf."*

Doing business as (dba).

The regulations have very strict requirements regarding the use of business names for aircraft operated in *common carriage* (vs. *private carriage*). 14 CFR 119.9 states very clearly that a *certificate holder under this part may not operate an aircraft under part 121 or part 135 of this chapter using a business name other than a business name appearing in the certificate holder's operations specifications.* 14 CFR 215 further refines this requirement:

§ 215.3 Use of name.

> *In holding out to the public and in performing air transportation services, a direct air carrier or foreign direct air carrier subject to this part shall use only the name in which its operating authorization is issued or trade name is registered, and shall not operate or hold out to the public in a name not acknowledged by the Department to be so registered. Minor variations in the use of this name, including abbreviations, contractions, initial letters, or other variations of the name that are identifiable with the authorized name, are permitted. Slogans and service marks shall not be considered names for the purpose of this part, and their use is not restricted. [Emphasis added]*

"Operated by" stickers.

Some might argue that as long as the aircraft has an "Operated by [insert air carrier's name here]" marking on the aircraft, they meet the requirements of the regulations. Thus, in all *vendor*-styled air ambulance "programs", you will find the aircraft clearly marked, painted, and predominantly logo'ed in the *business name* (dba) of the "program", then, in some inconspicuous location somewhere on the aircraft, an "Operated by" sticker. But, those who argue this ignore the first requirement in the regulation. Subparagraph (b) of FAR 119.9 does not provide an exclusion from applicability of subparagraph (a). Subparagraph (b) simply requires that the air carrier mark the aircraft with a legitimate business name of the air carrier, and subparagraph (a) says that it cannot be in a name *other than* that authorized in the air carrier's OPSPECS. As found in many geographical

locations today, an air carrier may hold the contracts as the *vendor* for two independent "programs" located in the same geographical region, and the aircraft (the "program's fleet") all predominantly representing some entity other than the air carrier even though both "fleets" of aircraft are being **operated** in *common carriage* by the same air carrier.

If one were to examine the Federal Register regarding FAR 119.9(b), one should quickly discern that the rule was not created to provide an apparent loophole allowing air carriers to display and **operate** aircraft in the business name (dba) of another if they were to inconspicuously apply an "Operated By" sticker someplace on that aircraft. It was created for security reasons to allow an air carrier to display an authorized dba on the aircraft or their certificate number instead. Yet, this is the very rule that is being cited when one explains that they can boldly apply the non-certificated entity's "program" name on the aircraft because the air carrier used an inconspicuous "Operated By" decal. And, it should be noted that this (mis)application of the rule only began after the 2005 focus on operational control began after the fractional ownership crisis—until then, only the "program" name was typically found on any helicopter used in *vendor*-styled air ambulance *common carriage* services.

Air carriers are competing as *vendors* for "program contracts", not competing in air commerce themselves.

During the four days of testimony, Boston MedFlight, LifeFlight of Maine, and Mayo Clinic all showcased *their* air ambulance programs. None of these entities are certificate holders. All of them are operating aircraft in their business name because they have a *vendor* air carrier who vied to get that contract. The "program" is a legally distinct business holding out as principles to the public as *the* air ambulance service, and the air carrier is an agent of the program.

To illustrate this point, simply examine how Boston MedFlite, LifeFlight of Maine, and Mayo Clinic all represented themselves at the NTSB hearing. *They* owned their aircraft. *They* use it in their name. *They* open and close bases according to *their* needs. *They* decide what type of aircraft *they* with to use. *They* schedule it. *They* staff it with their crews. *They* market it in their name. *They* hold out as the air ambulance company. *They* bill the patient and government for their services. *They* solicit money in their name in the form of grants and donations, as non-profits, to fund it. *They* purchase safety equipment to be used. *They* tell you all about their safety record. *They* write Standard Operating Procedures for *their* operations. *They* expect the aircraft to **operate** according to their needs. And, *they* hire a "*vendor*" air carriers to accomplish all this.

Yet, they insist that they have no *operational control*.

In his testimony, Thomas Judge, Executive Director for LifeFlight of Maine stated that "when it comes to operational control, we draw an extremely bright line bright line between the clinical and the operational system…we will make a flight request to our operator, they have an operational control system that they put in place, and the pilots,

working in their system accept the request." In essence, he tried to portray it such that it was a totally independent system—basically, however, the reality is that if there is no weather or other risk for the pilot to decline the flight, LifeFlight uses its *authority* to *initiate* the flight in *their* name using the authority it has under its contract.

Likewise, Mayo Clinic tried to portray it such that the operational control system was completely independent—that they were merely the "customer" of the air carrier. But, then the Medical Director for Mayo went on to testify how Mayo Clinic owned its aircraft, and how they were very involved in causing it to become an IFR program, and how *they* "protect the pilot (his job)" from operational matters. Mayo Clinic submitted as record evidence (docket exhibits) how Mayo is very involved with the aviation business *decisions* as it applies to *their* holding out, and establishment of "protocols" ("Mayo Standard Operating Procedures", see exhibits 409654-8).

In his testimony (Panel 7), Neil Weink tried his best to present the "bright line" relationship as well, but revealed that the "bright line" is very blurry indeed. Mr Weink represented himself as the senior line pilot for the Mayo "program", causing the NTSB to even list him in the witness list as "Witness #24, Neil Weink**, Chief Pilot, Safety Operations Base Manager, Mayo Clinic, Rochester, Minnesota".** But, that was really a misrepresentation of the facts, as Mr. Weink is merely senior line pilot for Omni who works at the Mayo "Program". If one were to examine the contract (*wet lease* agreement) between Mayo and Omniflight, they might find that Mr. Weink's is performing contractual duties to act more as an agent for Mayo and to function for Mayo as a pseudo "Chief Pilot" locally. How did Mr. Weink embody it in his testimony when he kept referring to "us?" He said, "When I refer to 'us', I mean we at Mayo…." Then, he went on to explain how the air carrier would send "them" any new hires to get "their" thumb's up (approval)—does that approval to hire someone include a "thumbs up" from Mayo? *Who* has authority to effectively hire *its* pilots through its *wet lease* agreement to fly aircraft *it* owns and holds out in air transportation in?

Regarding LifeFlight of Maine, it presented testimony as to how they are actively developing its trademarked Integrated Safety and Risk Management Program (IRMSM). If LifeFlight of Maine (who owns their own aircraft and cause them to be operated in a LifeFlight of Maine dba with LifeFlight of Maine employees assigned to duties aboard) separated themselves from the aviation side of the relationship, where exactly is the "bright line" when LifeFlight of Maine has set as an organizational goal to "align and reconcile the ERAMed Ops manual and the SMS with IRSMS®, with adherence to the established review and approval pathway [identified by IRSMS]." Considering that this region's air medical "services" State authorizations are held almost exclusively by LifeFlight of Maine, how much leverage does LifeFlight of Maine have over the air carrier to conform to "customer's" *operational control* needs if the air carrier wishes to keep this "contract"?

Boston Medflight's Chief Executive Officer, Susan Wadel testified and clearly demonstrated the "bright line" in *operational control* was almost invisible to see. She

presented clearly that Boston MedFlight pays the training costs and simulator costs for this "program". She reported that nearly 70% of their business comes from helicopter air ambulance services. She indicated that Boston MedFlight spends quite a bit of money to operate their air ambulance service. She said:

We currently operate two bases, three helicopters—one of our helicopters is staffed only 12 hours a day, so we really have only 2-1/2 helicopters—a jet, and a ground vehicle, and our communications center is responsible for taking any requests and assigning an appropriate vehicle based on guidelines developed by our communications personnel. Approximately 70% of our services are helicopter and 5% fixed wing…. When we added night vision goggles to our three aircraft. I believe the total expenditure for that was in excess of $330,000 dollars. Running a program that puts safety and quality patient care first, many of the members of this audience will tell you is a very expensive proposition…. We just purchased a Sikorsky S76 C++ model…. We pay for the cost of night vision training, night vision equipment. We also send our pilots to flight simulation on a biannual basis, our pilots will go twice a year…and [the cost for pilot training] will also include in-house pilot training, in terms of flight hours….

Therefore, in conclusion, there are numerous examples that demonstrate that there is a huge problem with *operational control* in this industry, and the testimony at the hearing should have clearly spotlighted this fact. The testimony of the witnesses plainly demonstrated that the *air carrier* is no longer the air carrier in many air ambulance operations; they are air carriers who have franchised their certificates throughout the evolution of this industry as contractual "vendors" to the non-certificated entities who *holding out* in air transportation services themselves. In HEMS, our industry has become predominantly organized under a "*vendor*-styled" business model.

Vendor-styled "program" owners will try to convince everyone that is simply a "*request* for air services" made *to* the air carrier, but that hardly reveals the truth of the overall operation. The reality is that the legally distinct *vendor*-styled "program" is really the *principle* entity holding out to the public without an air carrier certificate and that they generally have a contractual authority to initiate, conduct, and terminate flights on behalf of themselves in air commerce.

They have *operational control* and exercise it frequently!

Sincerely,

D.D. Write
Copperas Cove, TX

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[*] "V*endor*-styled" is a term that more accurately describes the *business* model where the *air carrier* has been solicited by an entity other than itself and where that other entity holds out to the public as principles in air ambulance services, but who use a *vendor* (or several *vendors*) instead of having sought its own Part 135 certificate. ***"Community*-based"** could mean two things: It could mean an *operational* model that

positions aircraft in the rural parts of a region to minimize, away from a trauma center; or it could mean an *business* model where the air carrier has placed its aircraft into the rural communities. **"*Hospital*-based"** could mean two things also: It could mean an *operational* model where the entity keeps the aircraft physically at the hospital, centrally located to be used in any section of the service area, or it could mean a *business* model where the air carrier has contracted in a traditional manner with a hospital to "vend" for them. For instance: A "*hospital*-based" *business* model might describe where an air carrier has contracted to "vend" services for a hospital, but where the hospital itself has several aircraft that they are using in a "*community* based" *operational* model.

[†] The attorneys at **Robert A. Klingler Co., LPA** represented a helicopter pilot who flew emergency medical flights for Miami Valley Hospital's CareFlight program. The pilot was directly employed by CJ Systems Aviation Group, Inc., but flew out of, and for, Miami Valley Hospital. The pilot was terminated after making repeated complaints about safety problems with the helicopters in the CareFlight program. After a four-day trial before an Administrative Law Judge, a decision was rendered in the pilot's favor against both CJ Systems and Miami Valley Hospital in the amount of $80,000 for lost income, $100,000 for emotional distress, and attorney fees and expenses. In addition, the pilot was reinstated to his position. *Richard Evans v. Miami Valley Hospital, et al.*, Case no. 2006-AIR-000022 (United States Department of Labor, Office of Administrative Law Judges) (August 2007).

From: Ferreri Paolo [mailto:Paolo.Ferreri@agustawestland.com]
Sent: Saturday, March 07, 2009 8:23 PM
To: HEMS
Subject: Additional comment to the public hearing on HEMS safety. Cat A operations.

Submitted to the Board of Inquiries, Mr. Robert Sumwalt, Chairman.

Mr. Chairman,

I have attended with great interest the Public Hearing on EMS Safety, held by the NTSB in Washington, DC, last February. While the overall session was outstanding and informative on many aspect of HEMS safety, I was surprised that not one single word was spent in consideration of Category A Operations for EMS helicopters.

As Director of Technical Support, and principal accident investigator for my company's North Amrican subsidiary, I have personally participated to the majority of the investigations conducted in North and South America on our products in the last 30 years.

In the most recent 5 or 6 years, I have personally investigated 5 EMS helicopter accidents, all in the United States, that have occurred during the take-off phase of the flight. While none of these accidents resulted in fatalities, in at least a couple of them this was due only for what you could call "miraculous circumstances".

The cause of these 5 accidents was identified, in 3 cases, in the pilot attempting to take-off with the engine selector(s) not properly configured. In one case, in the loss of power of one engine that had reverted to Manual Mode and had gone unrecognized. And in one to a loss of engine power for undetermined reasons.

My observation is that ALL FIVE of these accidents would have been simple incidents with no serious consequence for the aircraft and the occupants, had the pilot followed the Category A take-off procedure published in the Rotorcraft Flight Manual of all five involved aircraft.

All our most recently certified twin-engine helicopter models (the A109K2, A109E, A109S and AB/AW139) are certified and capable to follow Cat A flight paths up to the maximum certificated gross weight and up to several thousand of feet of density altitude. We publish a Cat A Supplement in the RFM and we teach Cat A procedures in our pilot transition courses or in our Type Rating courses. At this point the economical impact of adopting Cat A procedures for all confined area or elevated helipad operations for our twin engine helicopters would be limited to recurrent training.

In spite of this, we do see a wide spread lack of interest and lack of understanding, in our own North American customer base, on the safety aspects of Cat A, adopted instead and mandated in other countries, and which has become available with the great power margins provided by the modern power plants and power transmission systems.

The above, respectfully submitted to the consideration of the Board.

Available for any additional details or clarifications,

Paolo Ferreri
AgustaWestland Philadelphia
Director of Technical Support
3050 Red Lion Rd
Philadelphia, PA 19114

-----Original Messag-------
From: Marc Williams ----------
Sent: Thursday, Marc----------
To: HEMS
Subject: Reference HEMS - NTSB Hearings

I am the lead pilot for a small midwest HEMS company and I'd like to make a first hand comment with regard to HEMS safety.
I flew helicopters in Vietnam of which over 800 were in combat. The accident rate was terrible. I lost my roommate due to night disorientation. The military has since gone to NVGs. Why not HEMS? Other than getting shot at, the HEMS missions are remarkable the same as the military. You protect the military pilots and crew, but not the civilian?

Please allow me:

Point #1 Pilot's don't hit what they can see. Of almost all of the night HEMS accidents, the pilot couldn't see the ground or object that they hit.

Point #2 If all of the above pilots had NVGs, you wouldn't be having these hearings. Most, if not all of the accidents, could have been prevented if the pilot could see at night.

Point #3 Small HEMS companies will not voluntarily implement an NVG program unless they are forced to. They always seem to find the money for other "necessary" things.

Point #4 The new "highest obstacle" rule is a useless effort to solve the accident problem. Rules that increase pilot work load, without tangible results, are counter productive.

Please have the courage to seriously address these issues. The life you save may be mine.

Thank you,

------- Williams R/W CFI CFII

From: Keith Hendricks [mailto:Keith.Hendricks@txairlife.com]
Sent: Wednesday, March 04, 2009 11:32 AM
To: HEMS
Subject: HEMS safety

My name is Keith Hendricks RN, CFRN, LP. I am a flight nurse with San Antonio AirLIFE, San Antonio, TX. We are a non-profit program established in 1991. We are a SPIFR program, CAMTS accredited, twin engine Bell 430 with the following safety items on our multiple aircraft: auto pilot, enhanced ground proximity warning system, traffic collision avoidance system, XM satellite weather data, multi-function display with weather overlay, moving map and obstacles, satellite position tracking, color weather radar and we are implementing NVG's. We operate all legs with medcrew on board part 135. Our pilots are current and proficient in IFR and we utilize this platform frequently during missions. Crew resource management is an expectation and is fully implemented in our program.

While our program has made a commitment to safety with these items, many competitors in our region have not, yet, the reimbursement is the same. I believe programs which do not utilize the numerous safety advancements available should receive lower reimbursement for flights. The increased reimbursements have lead to an explosion in the growth of for-profit models which will fly inappropriate patients not truly requiring air medical transport.

*I believe SPIFR should be required on a regionalized basis where the platform is appropriate due to weather conditions.

*Enhanced ground proximity/TAWS should be required.

*Traffic collision avoidance system should be required.

*NVG's should be required.

*Part 135 on all legs with medcrew on board should be required.

*CAMTS accreditation.

There is no silver bullet to fix the safety issues in HEMS, but these safety measures should be implemented by all programs which wish to provide this valuable resource to the public.

Sincerely,
Keith Hendricks

-----Original Message-----
From: ----------
Sent: ----------
To: HEMS
Subject: HEMS Crewmember PPE

Reference the ongoing HEMS review one rather indisious issue I have not seen addressed is the extent to which required personal protective equipment worn by HEMS crews, such as helmets, nomex clothing (aramid fiber, i.e. like putting on a plastic bag), high top leather boots etc. can promote heat related fatigue and problems during operations in warm to hot operating environments. Even though most EMS helicopters are air conditioned they area still like working in a greenhouse due to their small size, many windows, high outside air leaks, and the inefficiency of air conditioning units in such aircraft.

Standards organizations covering HEMS require this equipment, and I have no problem with it most of the time, excepting when ambient temperatures and/or humidity makes wearing the items very uncomfortable, distracting, and more fatiguing than not wearing it. I believe under such conditions this equipment contributes to less than optimal crew member decision making and believe crewmembers so affected should have the option of wearing what clothing and equipment tht is necessary to allow them to maintain their physical well-being. At present, in most HEMS operations, that is not a choice.

The military, from which the statistics are drawn to validate wearing this equipment, have provisos for its use in warm to hot environments - so too, should the HEMS community; especially considering the military have high physical standards compared to that of HEMS personnel who are not in such efficient physical shape with the ability to better shed heat build up.

If a survey were conducted concerning this issue I believe the results will validate what I have mentioned above.

Thank you.

Respectfully,
CMC

From: Stevens, Gary D
Sent: Monday, February 02, 2009 9:47 AM
To: henry.felices@faa.gov
Subject: FW: Helicopter EMS safety concern

Henry

Here is what we submitted to the NTSB for the hearings on helicopter EMS that start tomorrow in Washington. I wanted you to have this before I called you today.

Gary D. Stevens
Flight Safety Coordinator
Illinois Department of Transportation
Division of Aeronautics
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http://www.dot.il.gov/aero/index.html

From: Stevens, Gary D
Sent: Thursday, January 08, 2009 3:24 PM
To: 'HEMS@ntsb.gov'
Subject: Helicopter EMS safety concern

The Illinois Department of Transportation (IDOT) Division of Aeronautics requests these comments be entered in to the record and be given due consideration in the upcoming public hearing on Helicopter EMS Operations being held in February 2009 at the NTSB in Washington.

In the way of background, IDOT Division of Aeronautics was a pioneer in HEMS. The State provided helicopter EMS service in Illinois from 1971 through 2002 operating a fleet of single engine Bell 206 L series helicopters. In that 31 year period we enjoyed a perfect safety record and provided leadership in the development of providing helicopter EMS service and a network of safe hospital heliports in Illinois. The State's role in HEMS ranged from being an exclusive provider of the service to the formation of several HEMS programs and the development of state-wide system of hospital heliports and trauma centers. Today there are 20 privately run based EMS helicopter services in Illinois serving 140 hospital heliports.

IDOT is no longer a provider of HEMS, but we do play an active role in safety through our partnership with the Illinois Association of Air and Critical Care Transport (IAACCT, the state-wide association of HEMS providers). We meet throughout the year on a regular basis with IAACCT to discuss safety issues and operational problems with hospital heliports. Through this partnership the State of Illinois and IAACCT produced a helicopter/heliport safety video that was distributed to every hospital with a heliport in the state and has been widely reproduced and used in other states. The State has produced and maintains on line an up to date Hospital Heliport Directory available at www.dot.il.gov/aero. The State continues by law to issue Certificates of Approval and inspect 140 hospital heliports to ensure compliance with minimum safety standards. The partnership with IAACCT encourages the reporting of hazards at hospital heliports and IDOT Division of Aeronautics places a priority on investigating and resolving these safety issues. Pertinent information is distributed to HEMS operators through a network of e-mail notification and updates to the hospital heliport directory on the web site. Until the fatal HEMS accident involving a wire strike on an antenna near Chicago in the fall of 2008, the State of Illinois enjoyed a perfect safety record in helicopter EMS service. We offer this information in the spirit of not only pride in our heritage but as perhaps a model that can be used by others to promote safety in the industry.

An Area of Concern

As stated earlier, IDOT Division of Aeronautics' current role in HEMS is mainly focused on heliport safety. An area of real concern has recently surfaced that we feel needs to be addressed. HEMS operators and operators throughout the General Aviation community have enthusiastically embraced GPS navigation. The advances made with GPS technology give pilots in the cockpit tools that most could not have imagined 20 years ago. A portable GPS device (used by many operators) can provide terrain and obstruction alerts and warnings, provide real time weather and provide a data base of any landing facility in the FAA's system. All the warnings and disclaimers aside from the GPS manufacturers, pilots are using and will continue using these devices as a valuable tool in the cockpit. A current data base in a portable GPS unit can and does provide pilots with critical safety information that can save lives and greatly enhance safety.

The problem in relying on a current data base update from the GPS manufacturer is assuming the data obtained from the FAA is current. This unfortunately is not the case. Information on two hospital heliports in Illinois was submitted a year ago with revised 5010 Airport Master records. Both were for replacement hospitals and heliports in new

locations. To date, neither new hospital heliport appears in the FAA data base of aeronautical facilities and one hospital heliport remains in the FAA data base in the location of the old hospital heliport that has closed. As could be expected, an unfamiliar HEMS crew landed at the closed facility undoubtedly relying on GPS information. On a recent trip conducting recurrent hospital heliport inspections in Illinois, 4 of 7 hospital heliports were found to have significant errors using the FAA data base obtained by the GPS manufacturer. Total reliance on using the direct function of the GPS unit to navigate to hospital heliports on that single day would have resulted in being off course from 1,500' to over 60 miles. All of this is a result of either inaccurate or old data obtained from the FAA 5010 data base.

Again, in spite of all the disclaimers made by the manufacturers of GPS units, pilots will continue to use the features these units offer. Up to this time, GPS data bases did not include private-use facilities. Hospital heliports all fall in to this category. If the data is available from the FAA it should be accurate and timely. Lack of staffing or the breakdown of a system within the FAA may be responsible for this problem. In any case a means of verifying the data on hospital heliports and disseminating changes in a timely matter is essential to safety in HEMS operations. If the data is available from the FAA it should be passed on to users as current and accurate information or should not be made available in the interest of safety.

Thank you for your consideration. Please feel free to contact us with any questions.

Gary D. Stevens
Flight Safety Coordinator
Illinois Department of Transportation
Division of Aeronautics
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---------- Telephone

---------- Facsimile
gary.d.stevens@illinois.gov
http://www.dot.il.gov/aero/index.html

From: James Whitman---------- ---------- -------
Sent: Saturday, Februa---------- - -- -------
To: HEMS
Subject: Helicopter EMS OperationsTo whom it may concern:

I have been flying EMS helicopters since 1984. With the increase of accidents in the EMS industry it reminds me of the mid-1980's when there was a terrible number of crashes. Since then we have seen the accident rate subside and then over the last two years it has begun to increase once again and I believe that it is largely because we have had a new generation of pilots enter the work force and the lessons learned in the 1980's have been forgotten..
The decline of the accident rate after the mid-1980s was largely due to a change in the staffing requirements of each helicopter base. Prior to the mid to late 1980 the standard was 3 pilots assigned to each helicopter. After that was raised to 4 pilots per helicopter, the rate declined because the pilots no longer were chronically fatigued and had an opportunity for a quality of life away from their work.
As of late, there has been a relative shortage of pilots at many bases and what is listed as a 4 pilot compliment of pilots per helicopter in reality usually ends up being a 3 pilot staffing per helicopter for long periods of time. While the companies provide overtime pay and attempt to provide coverage by sending other pilots to cover the extra shifts, the end result equates to the problems of the 1980's chronic fatigue, judgment errors and pilots cutting corners to get by.
The technology of today is definitely better than the 1980's to include better weather reporting to include Doppler radar sites readily available, Internet weather sites, the HEMS Weather Tool, GPS navigation, etc. but while I appreciate the new technology that has been developed over the last 20 years, it was not the technology that cause the accident rate to decline in the late 1980's but increased staffing and a more rested pilot with better quality of life.

Weather Minimums: It seems to me that if standard VFR minimums are generally 1000 foot ceiling and 3 statute miles, when the ceilings are lower, the visibility should **not** also be lowered for helicopter flight but increased (800 ft. & 4 miles). At one place I worked, they called this a "sliding scale" where when the ceiling came down, the visibility requirements went up. Also when the ceilings go above 1000 feet, then visibility requirements can go down for VFR operations.
For Example:
Ceiling/Vis.
1500/1
1200/2
1000/3
800/4
700/5
The benefit of this kind of weather formula is that when the ceiling decreases, the increased visibility provides enough forward visibility to avoid obstacles and observe deteriorating weather well in advance of encountering Inadvertent IMC.
In summary, it is my belief that a large part of the accident rate is due to a new generation of EMS pilots who have not learned the lessons of the past and due to under staffing, pilots are making judgment errors and taking short cuts due to chronic fatigue. Also I believe weather minimums should be arranged on the "sliding scale," that when the ceilings decrease, the required visibility for helicopter flight should increase.

Thanks you for your time and interest.

Sincerely,

James P. Whitman
EMS-------
Com---------- -