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To Whom It May Concern:

At 3:00 am on Sunday May 11th I received a phone call from a flight nurse at the University of Wisconsin Med Flight Program informing me that one of their aircraft was missing somewhere near La Crosse, WI, and presumed to have crashed. The pilot was one of my closest friends. She asked if I could come to the hospital to provide support to the pilot's wife. I have been an EMS helicopter pilot since 2000. I had flown at the Med Flight program from 2002-2007. The flight physician and the flight nurse killed on that flight were professional colleagues and friends as well. The worst part is not having to be there to hear the screams and cries when the news finally arrives that their loved ones are dead, it is the culmination of the memories and dread that started to swell as soon as that phone rang... "Oh God, not again". I am an aviator and I honestly can never see the day when I will stop flying. It is one of the greatest gifts on this planet. Being able to do what I love while at the same time being able to provide a service that can help so many other people is truly amazing. Helicopter EMS is a vital piece of our national infrastructure, and I have been privileged to work with some of the best professionals in the business, but I have lost and continue to lose far too many friends while doing so. Something has to be done to stop the direction we are headed and I am truly saddened by the way we are going about it.

I work for the largest air medical provider in the country. My title of Certificate Compliance Evaluator means that I am responsible for training and checking of company pilots as well as assisting the company and the FAA in making sure we stay in compliance with the requirements and restrictions placed upon our Air Carrier Certificate. I also have develop and presented training materials on human factors and crew resource management for several years now. This work has afforded me an in depth look at the events that have lead us to this point, at the remedies that have been tried and the remedies that are being proposed. The 2 most common questions I hear in the HEMS industry are 1. "What is going on?" and 2. "How do we stop this?". Unfortunately most people are determined that there is some specific technology or regulation that can fix this problem. There are far too many variables to find one silver bullet. I whole heartedly agree that Night Vision Goggles are a necessary and welcome technology. Over half of all accidents happen at night and these happen to have a higher ratio of fatalities. Being able to see when you are flying at night versus the unaided eye being legally blind does generally allow one to avoid running into obstacles. Helicopter Terrain Avoidance Warning Systems can also be a huge aid in preventing accidents. There is no doubt that a computer that is able to visually alert you and aurally scold you when you are about to fly into an obstacle or terrain can be a huge resource in a cockpit were there is often only one pilot to manage the flight. Both of these pieces of technology have large benefits because they offer something that can be implemented for proportionately small commitments of finances and operated effectively with relatively small investments in additional training.

There have been some regulatory changes by the FAA to our industry and there have in turn been voluntary changes by operators to try to stem the tide of accidents. Many of these have been for the better and it should be recognized that without them we could be in a much worse position today. Not to mention that despite the industry trend there have been and continue to be examples of accidents and fatalities averted because of the professional and highly skilled individuals that operate and maintain the 800 or so EMS helicopters in our nation today.

The biggest problem we face today is that no one truly understands exactly how all of the known causal factors continue to interact to create the same types of accidents over and over again. Until recently, we did not even have reliable statistical evidence that the HEMS accident rate had been increasing. In fact there are people working in the industry today that do not believe the HEMS accident rate has increased or is even that bad! Thanks to the efforts Dr. Ira Blumen and the UCAN Safety Committee we have finally reached a point where the numbers are starting to hold some weight. Assisted by organizations such as AAMS, HAI, and IHST we are beginning to have numerical data to help define the scope of the problem and give us areas of focused concern. Unfortunately this brings us back to the beginning: We already knew Inadvertent Instrument Meteorological Conditions, Night time, Controlled Flight Into Terrain, Spatial Disorientation, Lack of visual cues due to weather are all deadly problems. We already knew aeronautical decision making plays an important role. What we do not know is the "why". Despite the dedicated efforts of some amazing NTSB investigators, the lack of information available in most accident investigations is criminal.

In the past it would have been unthinkable that we would install recording devices in an EC135 light twin, let alone an Astar single engine helicopter. Modern technology though has made it possible to have high-definition color video and audio from inside every cockpit for just a few thousand dollars. I own a \$90.00 hand-held GPS that stores the last 10 trips I make, Lat/Long – Altitude – ground speed - etc. Neither of the two \$12,000.00 Garmin IFR GPS units in N135UW that crashed in La Crosse, WI were able to offer up any information – which sure would have been helpful given that due to terrain, altitude and location we have no radar plot to use. Weather reports from the airport all list weather well above company and FAA minimums at the time of the accident, but just think if we had a glimpse of the actual weather near the accident site in real time? I could continue down this road for hours just on this accident alone. Less than 16% of all fatal accidents in the last year had post crash fires, in many of these accidents a simple digital recording device would have likely been able to survive and gives us usable information to find out exactly what happened and quite possibly give us the more important why.

I have seen aircraft do things the manufacturer says can not occur. I have observed pilots miss items on a checklist that they swear they did. I have seen the most proficient of pilots become distracted by the smallest of cockpit indications and place the aircraft in jeopardy. We have cockpit voice recorders and flight data recorders in airliners for a reason. They alone do not provide the keys to solving every accident but there sure have been a boon to completing an investigation correctly. They furthermore have provided the airlines with more robust training programs by being able to determine the actual problems and then train pilots accordingly. Just think how much better that information could be when we add pictures to it.

In April of 2000 the NTSB Board added there recommendation to require cockpit video recorders in light aircraft to there Most Wanted List, where it sits today with an open: unacceptable status. I urge you to recognize that this is the single greatest technology that can change this industry. We can finally identify what is really taking place in all of these diverse situations, with multiple crew and aircraft combinations. These accidents would finally provide real lessons learned and could be used to truly prevent new accidents through better training, safety awareness, and possibly policy change. In the interim it also provides a watchdog effect. As a whole I think the industry does a good job of trying to eliminate the "cowboys", but imagine if a city wanted to end speeding and placed a cop with radar on every street corner. I guarantee 100% compliance with the posted limit almost overnight! If everyone

is following company policy and procedure – which in turn is guided by the FAR's the industry will be inherently safer while we work on fixing this problem.

The FAA has the following posted on their website regarding recorders in HEMS aircraft.

Flight Data Recorders

Flight Data Recorders (FDRs) are not required for HEMS operations. FDRs offer value in any accident investigation by providing information on aircraft system status, flight path and attitude. The weight and cost of FDR systems are factors. Research and development is required to determine the appropriate standards for FDR data and survivability in the helicopter environment, which typically involves substantially lower speeds and altitudes than airplanes. Funds are currently best invested in preventive training.

However, the FAA is studying alternatives to expensive and heavy airliner-style FDRs, especially in light of the relatively low-impact forces in most helicopter accidents. By establishing a standard appropriate to the helicopter flight envelope, the FAA may be able to make meaningful future FDR rulemaking efforts.

In just over the last decade of HEMS operations 114 people have lost their life, approximately 11 per year is the current average. Since HEMS started back in the 1970's the total number of fatalities is well over 200 killed. If we can not fully learn what happened then how do we properly use funds on preventative training. We have all become a pack of safety dogs chasing our tails. If we are not learning from mistakes then more people will continue to die, and as such all those people, including my friends Steve, Darren, and Mark died in vain.

Respectfully,

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Certificate Compliance Evaluator

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