

THE UNIVERSITY OF WISCONSIN EMERGENCY MEDICINE RESIDENCY PROGRAM

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To whom it may concern on the NTSB Board,

By way of introduction, I am currently the interim Medical Director of the UW Med Flight program based at the University of Wisconsin Hospital in Madison, WI. I am an Emergency and Flight physician, and have been with this program as a flight physician since January of 2004. Our program is somewhat unique in that we fly with a medical crew configuration of physician-nurse. I was the Associate Medical Director for our program from January thru October of 2008, before being named interim Medical Director in October. Previous to that, I was a flight physician in my residency training program at Indiana University-Methodist Hospital in Indianapolis for three years ('97-'00). I am also a private pilot and aircraft owner with approximately 850 hours, and so understand the world of HEMS from both the aviation and medical side. One of our aircraft (N135UW) was involved in a fatal accident on the night of May 10th, 2008 in La Crosse, WI, resulting in the death of the three crew members on board. Obviously, this has had a profound effect on our program and we have spent a considerable amount of time discussing what may have happened, what could be done differently, and what we may need to do in the future as the HEMS industry changes, hopefully for the better. This letter is my own summary of some of those discussions, to be included in the public docket of material in preparation for the NTSB hearings beginning on February 3rd. The University of Wisconsin Med Flight program is absolutely committed to being at the forefront of any effective safety changes that result from these hearings, and we will be actively monitoring what transpires at these meetings, which I intend to observe first hand. My views in this letter are my own, based on my experience and background, and do not necessarily reflect that of the University of Wisconsin itself, the University of Wisconsin Hospital, the UW School of Medicine and Public Health (where I am a faculty member) or any other members of the UW Med Flight program (who I've encouraged to speak for themselves, and hope they do).

What follows are several ideas that have been discussed internally within our program, based on the practices of other HEMS programs in this and other countries, adapted to our own situation. Some of these ideas would fundamentally alter the nature of HEMS, and would therefore be controversial, but in light of the past year, it is obvious and imperative that all ideas and perspectives be considered.

The recommendation that NVG's be adapted through out the entire HEMS industry in this country is a step in the right direction, which we will be in the process of implementing, but some think that this is not going far enough. There has been considerable discussion as to whether the HEMS world should be flying full time with two pilots on board. While having one pilot on board is in line with the HEMS Op specs and Part 135, the discussion centers around two points: the fact that Part 121 operations are always conducted with two pilots on board, with a robust CRM program, and the resultant envios safety record they enjoy. Obviously Part 121 ops are not entirely

analogous to the HEMS world, and its highly UN-scheduled and unpredictable nature, but there is much that could be derived regardless. The other point of reference is the United States Army, the largest rotary wing operator in the world. They conduct most, if not all, of their operations with two pilots on board. This becomes especially important when discussing the use of NVG's, and the limitations of NVG's in certain situations, such as IIMC. There is much that is analogous with our scene flights to improvised LZ's, and the operations that the military conducts. I'm sure that this topic will be highly controversial in discussion, as it would essentially result in drastic changes to the fleet, and render many of the single engine (and even some of the light twin) aircraft obsolete, especially in high density altitude areas of the country. But I still think it is worth discussing. With one pilot as the flying pilot, the other can maintain situational awareness, communicate, interact with the ground units, the medical crew, ATC, and even check weather before launch while the flying pilot pre-flights and starts. One wonders with this discussion, if HEMS should have its own Part in the FAR's, which combines the pertinent parts of 121, 135, or even 91.

In addition to the concept of HEMS operations being conducted with two pilots, one wonders if in this era we are likely now entering, should the medical crews be certified by the FAA just as pilots, cabin crew on the airlines, A&P's and IA's, etc. With the emphasis on safety, flight ops, crew responsibility, AMRM (or CRM), one could argue that this should be considered. Again, controversial, and not likely to be met with universal acclaim, but a thought none the less of regulating and improving the training of the medical crews and making it more consistent across the country. The training would not have to be vast or extensive, but pertinent and to the point, and ensuring that all are on the same page.

A related topic to that mentioned above has to do with scene flights, especially night scene operations, which is widely recognized as the most dangerous flying we do. Here at UW, we have re-visited a topic that had been introduced in the past, but not widely used, which is the use of designated and pre-arranged LZ's. We had interacted with our local EMS agencies in the past and asked them to identify open areas that are known to be clear and free of obstructions (and regularly checked) such as large parking lots, local airports and private airstrips, and similar areas to be used at night when trying to get into a tight improvised LZ is unwise and potentially unsafe. We have re-introduced this to our EMS colleagues on the ground, and are discussing its wider implementation. I am aware that some aeromedical services will not do night scenes unless it is at a designated LZ. While some situations prevent this concept from being 100% utilized in our area, it is another thought that might minimize the dangers and increase the safety of our operations.

Since night operations are of such concern, especially in light of our own accident, we have had further discussion of changing how we conduct these flights. Thought may be given to increasing the night weather minimums to increase the margin of safety, especially when conducting ops outside of what is considered the local area. This may be in general practice already with other programs, but is something to be discussed across the HEMS world. Another idea, that had been brought up in discussion is the concept of VFR corridors with set GPS way points and minimum (conservative) enroute altitudes, especially in areas of hilly or mountainous terrain, or ground obstructions (large towers and the like). This would provide safe corridors in and out of tricky areas that would be adhered to as part of the ops specs for a service, especially at night.

On an entirely different note, and which likely morphs away from the NTSB and into the realm of medical practice, but is related nonetheless, is the idea that there should be closer scrutiny of the medical appropriateness of certain flights. Here at UW Med Flight, we are fortunate in that we have an attending level physician on the flight crew, intimately familiar with the system as a flight and emergency physician, who can assess the appropriateness of a flight in real time using very

experienced medical judgment. This provides us with a level of flexibility that other programs likely don't enjoy if they are protocol based. Despite this, we are actively evaluating flights, with the thought to develop rational, and likely more strict, criteria. This is not unique to us, but again, while this is likely very much outside the scope of the NTSB's focus, it is certainly a hot topic within the medical community, as it brings up questions of medical liability, medical control, etc. It is also very much related to the concept of safe operations in that the flights themselves should be appropriate and the risks evaluated rationally, which the medical crews must weigh themselves as the pilot will be blinded to the nature of the flight.

Related to this, and probably very much in the sights of the NTSB, is the idea of operational control as it pertains to the pressure to take a flight for medical reasons. We at UW are fortunate in that there is no pressure to take flights from the hospital, if the physician or medical crew, and/or the pilot decide that factors dictate that we turn down a flight, there is no feedback loop to review this. We operate independently, and have the luxury of not having to factor in outside pressure in our decision making process. Flights are accepted or turned down based on appropriate weather, safety, medical and other factors; without fear of external review or having to justify their decisions. Of that I am certain. What I do wonder, however, is if that is universal? And should it be discussed? If some programs have financial pressures, or competition to consider, does that influence their decision making process to take flights? We are fortunate in this region that there is very little, if any, direct competition between programs, but obviously that is not the case across the country. I have never heard of anything like call jumping or things of that nature in our region, but I have significant concerns that this is happening elsewhere to the detriment of us all.

After our accident, there was significant concern expressed that the January 2006 recommendations from the NTSB regarding NVG's and TAWS was not mandated by the FAA, and we have significant concerns as well that any future recommendations from the NTSB that result from these hearings need to be taken to the next level by the FAA. The industry as a whole will only adapt the NTSB guidelines when forced to by the FAA, and we have reached that point where this needs to happen for the sake of our future. There have been many ideas floated as possible responses to the current accident rate, some of which may be effective, others not, but the intention is to generate discussion and gather viewpoints from others in the HEMS world, so we can come to some reasonable consensus on safety practices that may fundamentally change how we operate for the better, and improve the accident rate of this past year.

I would like to thank you for providing me this opportunity to discuss my viewpoints, and would be happy to discuss them further in any other venue. There is much more to discuss and I am looking forward to the hearings in February and the discussion that is generated. Again, my views are my own as an individual, but one who has experience and training in this field and has experienced the pain and trauma of being in a program that has had a fatal accident. One never thinks this could happen to them, until the day it does. Now that it has, I have sat up, taken notice and want to do everything that is possible to prevent it from ever happening again to us or anyone else.

Sincerely,
Ryan Wubben, MD
January 13, 2009
Madison, Wisconsin