



19 March 2009

Hon. Robert Sumwalt, Chair Board of Inquiry HEMS Hearing  
National Transportation and Safety Board

Robert Dodd, PhD, Chief RE-10  
National Transportation Safety Board.

Dear Mr. Sumwalt, and Dr. Dodd:

On behalf of our entire organization I take this opportunity to thank you, your staff, and the Board for your commitment to improving the safety of air medical helicopters. We acknowledge our commitment and responsibility to support the Board's efforts in assuring a safer and higher quality air medical system.

LifeFlight is a founding member of the Patient First Air Ambulance Alliance and we obviously support all of the points made in the paper submitted to the Board. We take this opportunity to address some of the other issues explored at the Hearing.

As noted in my testimony, LifeFlight is a small, independent non-profit provider of critical care air and ground emergency services to the entire state of Maine. LifeFlight is owned by a consortium of non-profit healthcare systems who provided the original core funding for the program. LifeFlight is operated as an independent business unit and does not receive any underlying subsidy for operations.

LifeFlight is a member of the Northeast Air Alliance comprised of all of the flight programs in New England and eastern New York. LifeFlight provides mutual aid services to NH, VT, MA, and provide limited cross border services into the Provinces of Quebec and New Brunswick. We are very familiar with the Canadian HEMS system as the EHS in Nova Scotia assisted us in our development and we in turn assisted the Province of Newfoundland/Labrador in developing their provincial system in 2007.

LifeFlight's service area exceeds 50,000 sq. miles with a complex geography that is hostile to flight with extremes of temperature, mountains, a long coastline of populated islands, and the cold Labrador current which produced intense and quickly developing easterly storms and fog. Maine is the most densely forested state outside of Alaska and is among the most rural states by

population density. It is also one of the demographically oldest and poorest states in the country. Transport volume is low and the average patient leg of flights is 3-4x the national average. Payor mix includes 30% uninsured patients and high percentages of Medicare and Medicaid patients. LifeFlight is overseen by 18 specialist physicians from hospital around the state and has among the strictest medical utilization guidelines in the country and we are required to publicly report discharge in less than 24 hours after flight, compliance with national consensus medical criteria for flight, and quality assurance data. We would note that Clinical Practice Oversight Committee is comprised of physicians from hospitals that are intensely competing with one another.

LifeFlight has been in operation for 10 years. The program provides both helicopter and ground transport to assure both safety and reliability of service to meet state required 24 hour service availability. The state EMS Rules recognize that safety of flight precludes a rigid requirement for flight response but does not exempt us from providing 24 hour emergency services similar to other emergency providers.

Aviation services and management are provided through a long term contract with a Part 135 Certificate Holder. The aviation contract is designed to dis-incentivize flight, i.e. the best guarantee of profit for the aviation company would be to never undertake a flight.

We highlight these characteristics as we do not agree with many of the operating and economic assertions made at the Hearings. We are in fact extremely troubled by some of the testimony. We are as challenged economically as any provider in the country and have designed our system to consistently operate at a higher standard. We believe our operation is at the minimal acceptable standard for HEMS operations.

### **1) Aircraft attributes:**

We believe the basic standard should incorporate twin engine fully stabilized aircraft. As our service area includes remote rural areas, an extensive network of islands, and concentrated urban settings with roof top hospital helipads single engine aircraft, no matter the reliability of current engine performance, pose additional risk to operations.

Radar Altimeters: we cannot understand why a RADALTS are not required, especially for night scene or cross country operations. We do not believe the addition of NVG alters the fundamental need for operating radar altimeters.

Our current aircraft have multiply redundant navigation / moving map systems, weather radar, satellite tracking, are configured for NVG, and have been configured to accept HTAWS as the technology is finalized. We also configured the aircraft for TCAS but due to limited operations in urban areas held off on installation. We believe there should be an agreed standard for basic avionics equipment in air medical aircraft and agree that HTAWS will be a valuable safety enhancement. This should be required and we are committed to installation as we see the technology rapidly emerge now that the TSO has been completed.

We are tracking development of flight monitoring and recording systems. As we (as all HEMS providers) are not compensated for any additional safety technology we must calibrate our

additions of safety technology to cost, weight, and space in the aircraft but believe that safety recording systems that will support full FOQA systems need to be encouraged.

## **2) Aviation Operations:**

Full Part 135. Our aviation vendor has always considered medical crew as passengers and all flight legs other than maintenance flights have been conducted under full Part 135 requirements. We recognize there are limitations that preclude response to some flight requests do not accept that operations at less than Part 135 are appropriate. The current A021 Ops Specs changes are a move in the right direction but full Part 135 for all flight legs is appropriate for this setting.

Weather minima. LifeFlight's aviation vendor has consistently operated with extremely conservative flight requirements which exceed the current A021 Ops Specs minima. We will note that Keystone Helicopters (now eraMED) is the only major operator that has not experienced a crash in over 25 years. We believe the combination of full Part 135, conservative weather minima, and conservative pilot hiring requirements have been foundational elements in the safety profile.

Full IFR capability and performance indicators that incentivize IFR operations. IFR is the standards for commercial flight and we believe it should be required for HEMS. We understand all of the issues regarding low level IFR infrastructure and have creatively built (and continue to build) a IFR system in Maine. (see attached maps of AWOS and Approaches). We will note that in the early years of LifeFlight, operations were conducted VFR in IFR aircraft with IFR qualified pilots. We also note that IFR was consensus recommended for HEMS in the 1992 Industry Safety Summit.

Full NVG operations. NVG is still relatively new as finding resources for the investment took a lot of work. We believe that IFR is more important than NVG and we are concerned in listening to colleagues around the country that the current push for NVG is not just a safety enhancement but is being seen as a mechanism to improve flight volumes. We constantly remind people that NVG operations do not change the minimums.

Maintenance and Medical Crew Duty Requirements. While there is no imposed requirement for either our aviation operator mechanics or our medical crew, we have incorporated duty day requirements on both groups of personnel. Fatigue is a major issue in the error chain. We believe more attention needs to be paid to this issue.

Risk Assessment: Our pilots developed a flight risk assessment matrix that is used company wide by eraMED. We are looking at widening this assessment to more formally address and incorporate static risk for daily operations as well as dynamic, flight by flight assessment.

Dispatch and Operational Control: these requirements are managed by our aviation operator to meet FAA requirements. We believe there is additional opportunity to improve flight dispatch procedures in the HEMS community and are in agreement with NTSB recommendations.

Single pilot IFR operations. Our aircraft are light twin engine due to cost and a requirement for a second pilot would be extremely difficult to achieve economically and maintain current two aircraft coverage for Maine. While we recognize the enviable safety record in Canada, a dual pilot

requirement would need fundamental change in the reimbursement model for HEMS. We do believe that the rapidly evolving use of simulators will improve single pilot operations and should be encouraged.

### **3. Governance and organization.**

As the Hearings illustrated there is wide variation in the size, corporate structures, oversight, and governance of HEMS operations.

We believe that fully developed Safety Management Systems should move from the current best practice recommendation in the form of an AC by the FAA or the IHST to a required standard. Improving governance and culture are essential to continuous safety enhancement. We note that SMS is considered a standard requirement in other developed countries such as Canada, Australia, and New Zealand which are some years ahead of the US in the development of regulatory oversight.

In closing, we again commend the NTSB for their continued efforts to improve this essential service. We do not accept that significant improvement cannot be funded within the constraints of the current system. Our program is as financially challenged as all of the other HEMS providers in the US. We believe that while HEMS is fundamentally different than other on demand aviation, patients should be assured of a system that is as safe as current commercial aviation. In summary, we believe there are a number of essential standards for medical operations that should be recommended by the NTSB:

- Require IFR operations
- Require functioning radar altimeters for night scene and cross country operations.
- Increase weather minima requirements
- Require formalized risk assessment and dispatch procedures
- Require Part 135 for all operations
- Require HTAWS
- Require NVG
- Require SMS
- Develop a requirement required recording and flight monitoring systems.
- Develop medical crew and maintenance crew rest and duty requirements.

Please let us know what we can do to assist in your efforts.

Sincerely,

Thomas Judge, Executive Director  
LifeFlight of Maine