SYSTEMIC PROBLEMS AND SOLUTIONS IN AIR MEDICAL SERVICES

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OVERVIEW OF SYSTEMIC PROBLEMS IN AIR MEDICINE – FAILURE TO MEET THE PUBLIC TRUST

Aviation Safety, Patient Safety and Economics. There are three systemic problems in helicopter emergency medical services (HEMS): 1) aviation safety; 2) patient safety; and 3) the underlying economics affecting aviation and patient safety. The economics of HEMS are affected by the combination of Medicare reimbursement which has functioned as the "gas pedal" fueling the extraordinary growth without requiring consistent high standards, and the Airline Deregulation Act (ADA) which prevents states from providing "brakes", quality controls and integration of HMS into the EMS system. This unregulated system places patients at risk, and negatively impacts aviation safety. The number of HEMS accidents has dramatically increased in the past decade (115 crashes and 111 fatalities since 2000), with 10 fatal crashes and 35 dead in 2008-2009, the most recent occurring on November 13, with three fatalities. The EMS system is overwhelmed with HEMS bases opening and closing at will. The ADA prevents states from regulating medical **services** including 24/7 availability, dispatch, medical quality assurance, and geographic coverage. States report a chilling effect on regulation of even the medical **care** inside the helicopter due to ADA challenges. Reports of patients harmed from poor care or dying from delayed transports emanate from unregulated areas.

Public Perception Versus Reality: The public must be able to trust that every HEMS provider is making decisions on their behalf strictly on the basis of best medical and aviation practice. The public believes that all medical helicopters have the same levels of performance and aviation safety technology -- they do not. The public believes that all are well staffed by similarly trained medical crews with the latest medical technology to provide the critical care needed to keep them alive -- there is no such guarantee. The public believes that helicopters transport those in need quickly and efficiently to the closest appropriate hospital at the right time -- that may or may not be true depending on where they live. The systemic problems in HEMS must both be solved before the public expectation of a high quality, safe and coordinated air medical system can be achieved.

NTSB Recommendations. The National Transportation Safety Board (NTSB) examined the accidents and the underlying economics of HEMS in an unprecedented 4 day hearing in February, 2009. On September 2, NTSB issued a series of 21 recommendations that included numerous aviation safety improvements (such as HTAWS, auto-pilot etc). The NTSB also stepped outside its normal procedures and called for CMS to establish Medicare accreditation standards that include all of the NTSB safety recommendations and to not pay medical helicopters that don't meet these safety standards. Their recommendation is based on how Medicare accredits other health providers – if hospitals don't meet JCAHO quality and safety standards, they can't get paid by Medicare. The NTSB also recommended the Federal Interagency Committee on EMS establish national guidelines for use and integration of medical helicopters by states and localities. NTSB Chairman Deborah Hersman indicated that to address air medical safety problems, one needs to "follow the money."

"FOLLOW THE MONEY" – THE ECONOMIC DRIVERS AFFECTING AVIATION AND PATIENT SAFETY

Growth of HMS: Civilian "medevac" started in the early 1970's translating the military experience in Vietnam into newly developing trauma systems. Early medical helicopters were either military based, public safety, or hospital based affiliated with trauma centers. There was progressive and steady growth from about 30 medical helicopters in 1978 to an estimated 377 helicopters in 2000, with

development primarily among hospital-based programs. Since 2000 the number of aircraft has more than doubled to a current fleet of 870 helicopters, primarily among independent community based providers and concentrated in market areas based on payor profile. There are more helicopters in Arizona (55), Missouri (32) or Kentucky (27), than in all of Canada (26).

Medicare Fee Schedule: While growth has increased the availability of HEMS and improved access to care in some areas, unregulated growth has produced oversaturation in other areas increasing risks to patients and crew. The single most significant growth driver was implementation in 2002 of a new national Medicare ambulance fee schedule. CMS set reimbursement based on the hospital based, twin engine aircraft cost model to establish a relative value for rotor wing transport, but set no corresponding requirements other than a certified aircraft. The fee schedule more than doubled payments to community based helicopter providers while fixed wing and ground critical care transport as well as rural EMS were under-reimbursed. Growth in helicopters and suppliers dramatically impacted Medicare reimbursement for helicopter transport, increasing 434% between 2002-2009.

The Airline Deregulation Act. The ADA preempts states from regulating the "prices, routes, and services" of air carriers. Air ambulances are air carriers. The ADA was enacted in 1978 when air medicine was in its infancy and there were only a handful of medical helicopters around the country. Over the years, as some air medical programs didn't want to comply with state laws, they used the ADA via litigation or opinions from the Department of Transportation to invalidate them. Accordingly, states are extremely limited in their ability to regulate air ambulances as they do ground ambulances, control growth and placement, and incorporate them into their EMS system. They cannot effectively manage the economic problems outlined below.

The Economic Realities of HMS:

- HMS Providers are Paid Only Per Transport. HMS providers are paid only when they transport a patient rather than for readiness, creating a significant economic incentive to transport patients.
- HMS Reimbursement is Divorced from Quality, Aircraft or Service Capability. A medical helicopter is paid the same amount per transport whether it cost $800,000 with limited medical equipment and crew or $8 million with fully equipped twin engine state of the art aviation and patient care and crew capabilities.
- HMS Has High Costs and Low Margins. HMS is a high unit cost service with significant fixed costs often constituting 80-85% or more of operating budgets.
- Limited Pool of Flight Volume Per Market. There are only so many people in a market that ever could or should be transported by medical helicopter.
- Most HMS Patient Don't Have a Choice of Carrier. Unlike commercial aviation, most critically ill or injured patients don't choose whether they move by ground or air or who transports them.

Perverse Economic Incentives of HMS. As noted by the NTSB, the economic incentives for operational safety and integration into the EMS system are misaligned. For those air medical providers voluntarily meeting the highest quality and safety standards, the Medicare fee schedule is NOT a money-making proposition. However, because there are inconsistent state standards, no minimum Medicare requirements, and no payment differential in Medicare reimbursement based on aircraft safety and medical quality, some programs operate with lower standards and make a considerable profit – with reports as high as 30% profitability. The underlying economics of HMS drives decision making which is all too often not in the best interests of aviation or patient safety.

- Base Location Where Profitable, Not Where Needed. Bases locate in positive payor mix areas, resulting in a geographic maldistribution with some areas oversaturated and others underserved.

- Maximize Flight Volume. The pressure to fly was recognized by the testimony of physicians, pilots, nurses, and paramedics at the 2009 NTSB hearings. Market saturation pushes providers toward unnecessary risks:
  - Flying below weather minimums, call jumping and self-dispatch
  - Stacking flights with serious transport delays resulting in patient harm and some deaths
  - Inappropriate marketing or reimbursement to flight requestors to increase flight volume
  - Flying patients with minimal medical need who should moved by ground EMS at less cost.
- Reduce Medical or Safety Expenses. Programs are incentivized to reduce fixed costs, rather than invest in medical quality and aviation safety, such as more expensive aircraft, medical equipment or advanced crew.
- Raise Charges. Although Medicare payments are fixed, providers raise rates to private insurers and patients to cover fixed costs and generate margins where flight volume is insufficient to support them. Charges vary from $6-20K per transport depending on locale and the number of available helicopters. Counterintuitive to traditional market economics, more helicopters in a market often means higher charges to patients.
- Pressures for Less Regulation, Oversight and Accountability. The economics and drive toward flight volume incentivizes providers to work outside of the EMS system, rather than as a part of a coordinated delivery of critical care air medical services. Examples of patients harmed by a system that is supposed to protect them flow from unregulated areas where too many helicopters compete for patients, not markets.

TWO LEGISLATIVE INITIATIVES NECESSARY TO ADDRESS SYSTEMIC PROBLEMS

1) *The Patient Safety, Coordination and Protection Act, S. 848/HR 978* would clarify the role of federal and state oversight of medical helicopters. The legislation provides that notwithstanding the ADA, states may regulate patient safety, care and coordination -- the economics and medical aspects -- of air ambulances, just as they regulate the same with ground ambulances and hospitals. It does not encroach on FAA's exclusive jurisdiction over regulating aviation safety. The economics of health care are regulated by most states to some degree. Regulating just the medical "care" inside the helicopter is not sufficient. As evidenced by the current broken system, the free market will not protect patients. Oversight is necessary to ensure high quality, availability, acceptability and accessibility of air medical services.

2) Consistent with the NTSB recommendations, Senator Snowe's amendment under consideration in health reform would require CMS to set up an accreditation process for medical helicopters as a condition of participation in Medicare, taking into account the particular needs of rural and government owned providers. It is important to note that the ADA only prevents states from regulating "economics" of air ambulances – not the federal government. Enabling CMS to require air ambulances to meet consistent high standards to bill for the transport of Medicare beneficiaries has no impact on the ADA. Further, the amendment is consistent with Medicare conditions of participation for quality and safety of hospitals, doctors, and other health care providers. Requiring all medical helicopters providing services to Medicare beneficiaries to meet the highest standards is necessary to drive essential changes in the air medical industry to protect patients and the crew that serve them.

Both of these initiatives are necessary to fix the two systemic problems in the air medical industry. Critically ill and injured Medicare beneficiaries deserve no less the safest and highest quality air medical transport. The ADA must be addressed to enable reasonable state oversight of air medical services to ensure patient safety and effective integration into state emergency medical services. The public must be able to trust the air medical system.