Helicopter emergency services: A disparity between aviation and medical proficiency

MICHAEL K. ABERNETHY, MD | PHYSICIAN | OCTOBER 25, 2014
As the helicopter emergency services (HEMS) industry enters its fifth decade, there is an 800-pound gorilla in the room and nobody is talking. The average EMT, fireman and emergency physician too often make the flawed assumption that when it comes to HEMS, the industry is a uniform, high quality, strictly regulated entity. They assume that all HEMS programs use state of the art aircraft flown by well trained, experienced pilots. They assume all medical crews are the best of the best in their vocations receiving recurrent specialty training in the ICUs, ORs and EDs of regional hospitals.

At one time, over 12 years ago, these assumptions would have held some truth. Unfortunately, in 2014 there is an ever growing disparity when it comes to the aviation and medical proficiency within the U.S. HEMS industry.

Prior to the new millennium, HEMS was primarily a hospital-based service provided to the community much like an ED or trauma center. Almost all HEMS medical crews were trained and employed by large medical centers. The aircraft, pilots and mechanics were typically trained and employed by an aviation vendor. Medical institutions operated the medical side of HEMS. Aviation companies ran the aviation side.

In 2002 the Centers for Medicare & Medicaid Services (CMS) initiated a 434% increase in reimbursement for helicopter transport. This would change the very structure of the industry. One would assume this increased revenue would certainly lead to an upgrading of medical and aviation capabilities. Actually it did almost the opposite. It inadvertently triggered an uncontrolled growth in the number of medical helicopters (377 in 2000 to over 900 in 2014). Most of this growth has been in the corporate, profit driven sector of the industry, essentially dominated by three large corporations (Air Medical Group Holdings, PHI Air Medical, Air Methods Corporation). These three publicly traded corporations own, operate and control well over 1/3 of all U.S. HEMS programs.

Due to a controversial legal interpretation of the Airline Deregulation Act of 1978, state governments are extremely limited in their ability to regulate the business of HEMS. Currently there are no enforceable requirements that HEMS have any relationship with health care entities, medical centers or even EMS systems for the purpose of training or referral. States essentially cannot interfere with the business of HEMS. Throughout the nation almost every aspect of ground EMS is tightly regulated at the state level. HEMS is just the opposite. Medical standards, equipment and training (or lack of) are largely determined by individual programs. One programs medical crew may consist of two paramedics having token training/experience. Another program in the same region may use highly trained EM physician-nurse teams. One program may fly small 30-year-old single engine aircraft worth $700,000, while another local program invests in new $10 to 12 million state of the art, twin engine helicopters. Each program also largely determines their own fee structure. Liftoff charges range widely from $12,000 to $30,000 with an additional per loaded mile fee of $110 to $190.

Under the current CMS guidelines, all HEMS programs receive the same reimbursement per loaded patient mile regardless of aircraft size, level of care or capabilities. There is absolutely zero financial incentive for quality. Hospital-based programs are typically located in the region of the sponsoring institution. Corporate HEMS programs can be easily added, relocated or shut down, spread over wide areas covering several states. Wisconsin and Missouri have a very similar population and
geographic area. Wisconsin has adequate HEMS coverage with 12 helicopters. Missouri has 36. This gross oversaturation and maldistribution is driven by profit and loss. It has nothing to do with medical necessity.

CMS does not have any precertification or meaningful utilization requirements for HEMS as they do for almost every other area of medical care. HEMS is somehow inexplicably exempt. Payment by CMS is seldom denied or downgraded. Current published guidelines on HEMS utilization are so vague that almost any transport can be justified from a medical standpoint. If CMS pays, private insurers typically follow. As a result, the HEMS industry is one of the most potentially lucrative and unregulated entities in U.S. medicine.

The basic premise of HEMS is the stabilization and rapid transport of critically ill patients to definitive care. The standard in almost every developed country in the world is a medium to large sized dual engine helicopters in order to provide safety, adequate mission support and space for patient care. The use of small single engine helicopters is a rarity everywhere except in the U.S. where these small helicopters compose over 90% of the current corporate HEMS fleet.

Despite the lack of any financial incentive, there are still many excellent HEMS programs whose mission is focused on safety and quality patient care. They operate in the tradition of the early hospital based programs. They utilize highly trained, experienced pilots flying state of the art aircraft. Their medical crews have continual intensive training and experience. These programs have a close relationship with regional hospitals for purposes of training and medical direction. Unfortunately, as quality has been allowed to take a back seat to profit, the percentage of such programs maintaining this traditional, patient care centered model is rapidly fading. In 2014, there are pilots, nurses and medics who are readily hired into HEMS with levels of experience that would have not remotely qualified them for a job interview 15 years ago.

There is only one way to repair this very broken system. Common sense dictates that there has to be some degree of accountability. CMS reimbursement for HEMS transport must be tied to quality measures and appropriate utilization, as it is in almost every other aspect of modern medicine. When quality is incentivized, much of the redundant, profit-driven subsection of the HEMS industry will fade away and so will many of its inherent problems.

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