

The Role of the Paramedic in Transport Medicine and Crew Resource Management



Approved by the IAFCCP Board of Directors
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The International Association of Flight and Critical Care Paramedics (IAFCCP) was formed as a non-profit organization in 1986 and dedicated itself to promoting the global growth and development of the paramedic profession. The IAFCCP has expanded its membership to include all specialty care paramedics.

During the time of IAFCCP's formation, the air medical community was plagued by an alarming accident rate that approached nearly 8 accidents per year. With attention drawn to the rising accident rate and public opinion turning, the air medical community began internal processes to attempt to minimize the danger. The IAFCCP and other air medical associations issued position papers defining the minimal protective equipment for those working in the rotor-wing air medical environment. Through the support of a variety of professional associations including the IAFCCP, the Commission on Accreditation of Medical Transport Systems (CAMTS) was formed with the intent of improving air medical safety through the creation of voluntary industry standards. CAMTS promotes the safety of all modes of transportation for the sick and injured and we encourage all organizations to adopt these tenets and build upon them for the safety of their employees, patients and our citizens. Issues such as minimum weather requirements, aircraft safety equipment and crew safety training were areas of focus both in industry standards and voluntarily by the aviation operators. These efforts toward improved safety yielded an initial drop in the air medical accident rate to nearly 5 crashes per year during the late 1980's to mid-1990's. Unfortunately, the downward accident trend did not continue and subsequently reached a rate of nearly 11 crashes per year during the period from 1998-2001. Sadly, adding to this statistic was a crash that claimed the life of flight paramedic Tim Hynes, a founding member and past-president of the IAFCCP. Since that crash in 1998, nearly 60 persons have been killed and over 40 injured in air medical crashes. The most recent data collected by the Air Medical Memorial since 1980 shows almost 400 fatalities in the Helicopter Air Ambulance (HAA) industry in the U.S.

For perspective, a 20-year (1992-2011) data set on ground ambulance accidents reports an average of 4500 accidents per year, with an average of 1500 injuries & 33 fatalities each year. A brief overview of several incidents quickly identifies speed and lack of seat belt use as major contributing factors to both statistics. Both factors could have been mitigated through crew resource management (CRM) and standard adopted policies.

This original document was published over 14 years ago. The tenets have been adopted. Policies have been added. So, we ask why are our crew members, patients and friends are still being injured and killed? CRM should not be a lip service policy - but rather rules to live by. In organizations that truly have adopted the principles, the single common factor of incident is complacency – failure to comply with the guidelines set forth in an attempt to save one from harm. We advocate for all organizations and individuals to take a step back and reevaluate themselves. If you see an unsafe action, stop it – never submit to unsafe behaviors. If someone suggests an unsafe action, suggest a safe alternative. If necessary, discontinue a transport as there is no crew's lives worth that of a patient. We ask for you to do what is right, all the time, in every event.

While the tenets of this original document were focused on the air medical industry, some updates have been made to reflect our evolving membership, as they should apply unequivocally to all disciplines within the industry of medical transport. Minor adaptations unique to the mode of transportation, and additional components should be added in the adopting organization that include the well-being of the crew and all support staff. Examples are coming to duty ready to work (fit for duty), the promotion of a healthy lifestyle all of which contribute to mental awareness of the crew, and a 'Destination Zero' mindset.

The tenets of the original document published in 2003 live intact today and have been adopted by CAMTS. With some minor changes, below is the core of the original document and it should remain as close as possible to its original form.

In November of 2002, a comprehensive air medical safety document was released as a supplement to the Air Medical Physicians Handbook. This document entitled, "A Safety Review and Risk Assessment in Air Medical Transport" represents the most comprehensive review of air medical crash and safety data available to the air medical community. The document was compiled by the University of Chicago Aeromedical Network (UCAN) safety committee and was made available for mass reproduction and distribution through the financial support of many organizations including the IAFCCP. This document should be considered mandatory reading for all crew members and represents a valued adjunct to this position paper. One of the greatest factors to control air medical risk identified by the UCAN safety document was the concept of crew resource management. The CRM concept requires pilots to involve other team members in making safety related decisions regarding the flight. The IAFCCP fully supports the concept of CRM and this model is a cornerstone of the following position paper.

Below is the position of the International Association of Flight and Critical Care Paramedics regarding the role and responsibilities of the crew member regarding medical transport safety and Crew Resource Management:

- 1) The IAFCCP believes that the flight crew member should place the safety of the air medical environment above all other scene and transport priorities. Despite patient condition or personal needs of the crew, transport into unsafe flight conditions must not commence or continue.
- 2) The IAFCCP believes that the crew member should not participate in any behavior that might coerce a pilot into accepting or continuing a flight into weather that the pilot deems may be unsafe for flight.
- 3) The IAFCCP believes that the crew member should maintain situational awareness regarding safety at all times and specifically focus on the safety of the flight environment during all critical phases of flight (departures, landings, or as requested by the pilot) regardless of patient condition or other medical related duties.
- 4) The IAFCCP believes that the flight crew member should practice "sterile cockpit" procedures (limiting communication) during critical phases of flight to include departures, landings or at any time as requested by the pilot to enhance the safety of the flight environment.
- 5) The IAFCCP believes that air medical programs and aviation operators should have policies in place that do not permit a pilot to "isolate" in-flight communications with the flight crew

- member without first notifying the flight crew and without having a method in place for the flight crew member to contact the pilot in the event of an emergency.
- 6) The IAFCCP believes that per FAA regulations, the pilot-in-command will remain the final authority on the decision to accept, decline or abort a flight request. However, the IAFCCP believes that all air medical programs should have policies in place that require the pilot to honor the request of the crew member to decline or abort a transport.
 - 7) The IAFCCP believes that if a crew member requests that a flight be declined or aborted due to a safety concern, they should be able to do so without fear of reprisal or retribution.
 - 8) The IAFCCP believes that the crew member should be familiar with the published weather minimums utilized by their air transport service or operator.
 - 9) The IAFCCP believes that they should obtain and maintain skills that allow the flight paramedic to estimate weather conditions that are below their transport service's weather minimums.
 - 10) The IAFCCP believes that the crew member should immediately communicate any concerns to the pilot regarding in-flight practices or conditions that the crew member feels may be unsafe or do not comply with the policies of their air medical program or their aviation operator. If at any time the crew member feels the safety of the flight is jeopardized, the flight paramedic should request that the flight be aborted.
 - 11) The IAFCCP believes that the crew member should immediately report to the appropriate supervisory staff any practices committed by any medical team member that do not comply with the safety philosophies, directives, or policies established by their program or aviation operator.
 - 12) The IAFCCP believes that the crew member should receive annual safety specific practical and didactic training from their program or aviation operator which includes, but is not limited to, the following:
 - a. Physiologic aspects of flight
 - b. Patient loading and unloading
 - c. Safety in and around the aircraft
 - d. Passenger briefing (when appropriate)
 - e. Appropriate in-flight emergency procedures
 - f. Emergency landing procedures
 - g. Emergency evacuation procedures
 - h. Familiarity with survival equipment and procedure
 - 13) The IAFCCP believes that the pilot should involve the crew member in additional duties to enhance the safety of the aircraft which may include, but are not limited to, the following:
 - a. Identifying and relaying information to avoid other aircraft or ground obstacles
 - b. Evaluation of landing sites and airports for safety related issues
 - c. Performing coordination with ground personnel at a landing site via radio communications
 - d. Emergency shutdown of aircraft systems in the event of a crash
 - e. Assistance in obtaining information from aviation sectionals, other related maps, aircraft approach plates, and/or airport and landing zone guides
 - f. Assistance with completion of pre-flight, post-flight and emergency aircraft checklists

- 14) The IAFCCP believes that the crew member should complete an aircraft “walk-around” (external inspection of the airframe for potential safety threats) prior to every take-off of the aircraft. This inspection should include, but not be limited to, the following:
 - a. Disconnection of all external power sources, aircraft tie-downs and covers
 - b. Appropriate closure and securing of all aircraft doors
 - c. Ensuring that no straps or seat belts are left hanging outside of the aircraft
 - d. Securing of the patient litter(s)
 - e. Securing of fuel caps
 - f. Securing of engine cowlings
 - g. Leakage of fluids from the aircraft
- 15) The IAFCCP believes that the crew member should participate in providing initial and recurrent landing site safety and selection training for personnel who will be performing landing site duties within the service area of the crew member’s air medical program.
- 16) The IAFCCP believes that the crew member should participate in multi-disciplinary shift and/or pre-flight briefings; as well as post-flight debriefings to discuss issues related to safety of the flight environment.
- 17) The IAFCCP believes that the crew member should wear personal protective gear (as appropriate) to include, but not be limited to, the following:
 - a. Helmets of appropriate size that are designed for use in EMS helicopter operations
 - b. Helmets that are equipped with appropriate face visors to provide a greater measure of protection during day and night missions
 - c. Long sleeved Nomex uniforms of appropriate size and construction
 - d. Cotton, wool or Nomex undergarments
 - e. Gloves constructed of a flame retardant material
 - f. Natural leather high top boots with appropriate leather shields in place (if applicable) between the zipper and inner side of the boot
- 18) The IAFCCP believes that the crew member should perform continual self-evaluations to assess their own behaviors for evidence of safety complacency and take the necessary steps to immediately correct unsafe behaviors or attitudes as they are identified.
- 19) The IAFCCP believes that the crew member should participate in self-assessments to identify personal and professional stressors that may lead to eroded judgment. The crew member should seek constructive outlets to alleviate stress as required. Further, the crew member should remain watchful for signs of stress in co-workers that may lead to unsafe practices and bring constructive attention to these behaviors as necessary to maintain the safety of the transport program.
- 20) The IAFCCP believes that the crew member should be included as a member of a multi-disciplinary safety committee sponsored by their medical program or aviation operator. This safety committee should complete tasks to include, but not be limited to, the following:
 - a. Proactive review for possible safety threats to the medical program
 - b. Investigate, review and recommend action regarding reported or known safety issues
 - c. Ensure follow through on correcting safety related issues
 - d. Recommend changes in training to improve the safety of the flight environment

References:

- Accreditation Standards of the Commission on Accreditation of Medical Transport Systems.* (January, 2002). Anderson, South Carolina: Commission on Accreditation of Medical Transport Systems.
- Air Medical Honorees.* (September, 1994). Provo, UT: Rocky Mountain Helicopters, Inc.
<http://www.airmedicalmemorial.com/honorees.html>.
- Air Medical Systems Overview: Operations & Procedures.* Provo, UT: Rocky Mountain Helicopters, Inc.
- Blumen et al. (2002). *A Safety Review and Risk Assessment in Air Medical Transport.* Supplement to the Air Medical Physician Handbook. Salt Lake City, Utah: Air Medical Physicians Association.
- Chapter 5. Air Ambulance Operations. Section 4. Air Ambulance Operations Training Programs.* (March 13 1997). Washington, DC: Federal Aviation Administration. Retrieved March 26, 2003, from the World Wide Web: http://www2.faa.gov/avr/afs/faa/8400/8400_vol4/4_005_04.pdf.
- Personal Protective Gear for Airmedical Providers.* National Flight Paramedics Association Position Statement, 1995, Salt Lake City, Utah.

Jonathan Gryniuk was the original author of this document titled 'The Role of the Flight Paramedic in Air Medical Safety and Crew Resource Management' and was the president-elect of the IAFCCP (2003). He still serves on the board today as the CAMTS representative for the IAFCCP and is a Regional Safety Director for Air Methods Corporation.

Phil Ward authored the updates to reflect the evolution of the IAFCCP and the application of this document to all modes of medical transport. He serves as a Board Member at Large for the IAFCCP (2017).