

# Taking the Lead in HEMS Flight Safety



As the world's largest air ambulance operator, Air Methods has an obligation to use our leadership position responsibly to encourage safety improvements within the air medical community. We take that responsibility very seriously. Air Methods is the only HEMS operator actively working with the FAA's Safety Management System (SMS) team to pursue higher levels of SMS proficiency. Per the FAA, our SMS program is at a similar maturity level to the majority of major U.S. airlines. Air Methods is undertaking an aggressive pursuit of adherence to the FAA's Advisory Circular on SMS through targeted and focused efforts and initiatives.

## FAA-Rated Safety Management System

In June 2006, the FAA published Advisory Circular (AC) 120-92, "Introduction to Safety Management Systems for Air Operators," which contains information to develop SMS programs voluntarily. The AC introduces the concept of an SMS to aviation service providers, including air taxi operators, and provides guidance for SMS development. This AC is not mandatory and does not constitute a regulation. It is purely voluntary. Air Methods has already started to implement the recommended FAA quality management programs and tools to control risk and is working closely with the FAA by participating in their SMS trial project. Many air medical operators make claims that they have a fully functional SMS in place. The key question is whether the SMS is based on compliance with the FAA's SMS guidance.

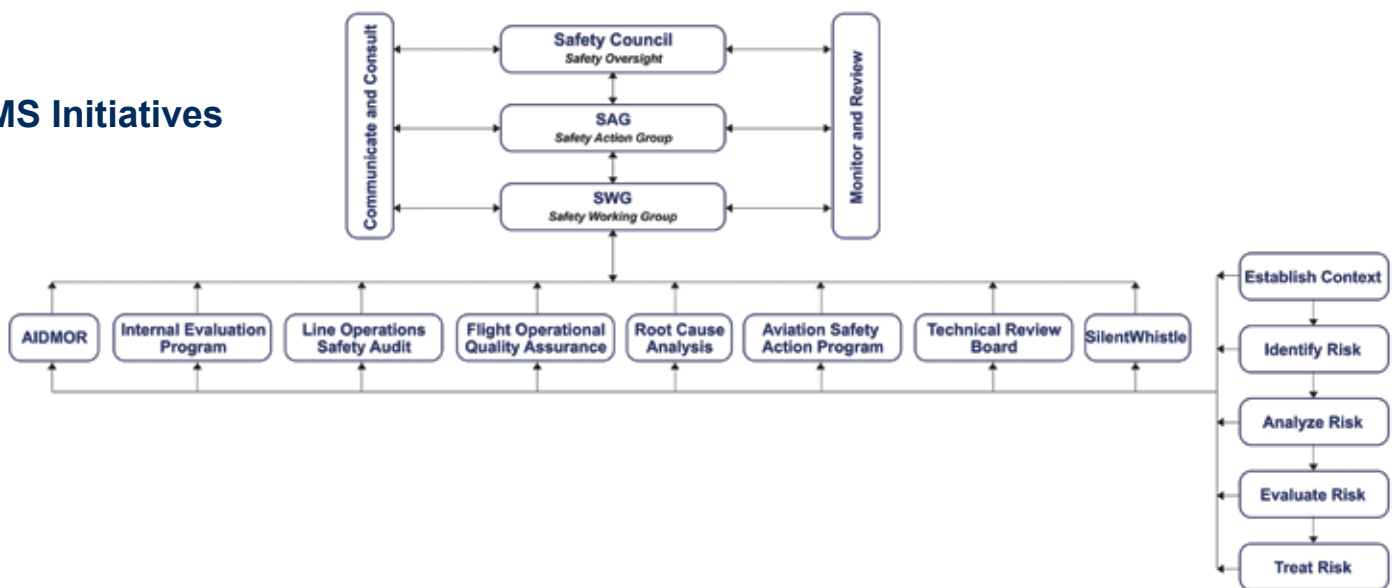
One of Air Methods' top priorities in 2009 was the establishment of an Aviation Safety Action Program (ASAP). In July 2009, Air Methods was the first large rotor-wing operator in the country, and the second in the air medical industry to implement an ASAP. Often used by major airlines, the ASAP is a voluntary, self-reporting program designed to identify and reduce possible flight safety concerns. ASAP uses employee input to identify significant safety concerns and issues; operational

deficiencies; noncompliance with regulations; deviations from company policies and procedures; and unusual events. If the report meets the acceptance criteria of the program it is investigated, recommendations are proposed and corrective actions are determined. ASAP provides a level of visibility to safety information and data collection important in facilitating safety improvement.

A second important SMS program Air Methods is close to fully implementing is the Line Operations Safety Audit (LOSA). This methodology utilizes trained observers riding in the cockpit to evaluate several aspects of crew performance. The in-flight observers record the various threats encountered by the crew, types of errors committed, and most importantly, they record how flight crews manage these situations to maintain safety.

The third major initiative within the SMS is a Flight Operational Quality Assurance (FOQA) program. FOQA is a method of capturing and analyzing the data generated by an aircraft, similar to a "black box." Many U.S. airlines have initiated FOQA programs to collect, store and analyze recorded flight data. Air Methods intends to improve its overall safety, increase maintenance effectiveness and reduce operational costs through the FOQA program.

## SMS Initiatives



## Internal safety initiatives

To ensure all employees, from the base level and up, fully understand the company's safety policy, a monthly newsletter, *Safety Connect*, is distributed. This newsletter is one of many vehicles the company uses to communicate safety specific information concerning the company and industry to employees. The SilentWhistle program is another new tool. This anonymous reporting system allows all company



employees, as well as customers and vendors, to provide valuable feedback, comments, suggestions and alerts relative to any safety concern.

An executive Safety Council, chaired by the CEO, also was formed and meets regularly at headquarters to provide strategic oversight to SMS and the safety department. Another continuous improvement initiative is the Root Cause Analysis (RCA) program team which meets monthly. RCA is aimed at identifying the root causes of incidents, problems and/or events. RCA is predicated on the belief that problems are best solved by attempting to correct or eliminate root causes, as opposed to merely addressing the immediate obvious symptoms. It is hoped that the likelihood of problem recurrence will be minimized.

Air Medical Resource Management (AMRM) training is conducted at field activities. All Base Safety Managers receive safety training either in person or through Web-X classes presented by the safety department. Air Methods' AMRM course is the only operator-sponsored course to be awarded six CEUs from the Air & Surface Transport Nurses Association (ASTNA).

## Safety Technologies

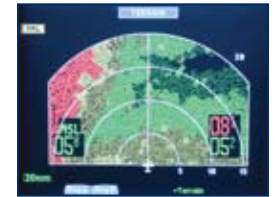
Since 2006, Air Methods has made a very significant investment in cockpit technologies and operational control center capabilities and is proud to be out in front of any mandates by the FAA to install these technologies. In all new and refurbished aircraft, Air Methods is committing to installing the following technologies:



**Night Vision Goggles** – the goggles enhance visibility during night transports so pilots can better detect hazards and obstructions and have greater situational awareness. (136 of 314 aircraft)

### Helicopter Terrain Avoidance Warning Systems – TAWS

shows approaching obstacles, so pilots can steer clear well in advance. (82 of 314 aircraft)



**Garmin GPS** – an all-in-one GPS, navigation and communication unit that makes navigation calculations and map redraw rates at a fast

speed making it easier for pilots to read and interpret critical information. (82 of 314 aircraft)

**XM Satellite Weather** – provides pilots access to constantly-updated, high resolution weather information, right in the cockpit (82 of 314 aircraft)



**Satellite Tracking** – the flight tracking system greatly improves our levels of operational efficiency, crew support, and aircraft monitoring because it transmits real-time position reports via satellite to any authorized computer. Flight details recorded includes course, altitude, destination, and estimated time of arrival (ETA) (297 of 314 aircraft)

## Operational Control Center (OCC)

24 hours a day, seven days a week, Air Methods' OCC was established in March 2007, and is based at the company's headquarters in Englewood, Colo. The center is staffed two personnel on duty during each 12-hour shift – a lead and specialist. The lead is a pilot and has EMS flying experience.

Not all OCCs in the air medical industry are the same and Air Methods' technologies make the company's center unique.

**Flight Management System** – foundational system for the OCC

**Site Watch** – this system is fed flight plans from the program's CAD systems and then compares the flight plans to hazardous weather and generates an alert if threshold is reached. The system will add a 30 nautical mile bubble around the aircraft and if the bubble touches hazardous weather an alert is generated and the OCC evaluates.



**Pilot 411** – internal Air Methods system that tracks duty times, flight releases and flight data

**Report Manager** – tracks flights and includes pertinent data related to the flight

**Hi-Path Phone System** – direct communications with aircraft via satellite phone communications.



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