



WHAT'S WORKED IN AIRMED OPS & WHY IT MATTERS FOR PUBLIC SAFETY

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Twenty years ago, air medical operations faced significantly higher fatal accident rates than they do now. Over time, the industry recognized the accidents were not isolated events, but rather the result of identifiable risks that needed to be addressed.

Today, dedicated air medical programs operate with some of the lowest accident rates in recent history. The improvements did not come from a single change, but from a combination of advances in technology, training and how risk is managed during day-to-day operations.

While not every public safety aviation unit operates a dedicated air medical program, many support the missions in some capacity. The practices that have improved safety in the air medical community are not limited to one type of operation. They reflect a disciplined approach to decision making, crew coordination and operational control that can be applied across all mission types.

Understanding what has made a difference in air medical operations provides a useful framework for improving safety in public safety aviation as a whole. The improvements are visible not only in accident data, but in how daily operations are conducted.

Structured Decision Making & Risk Assessment

Several key areas have driven the air medical sector's safety advances. One of the most notable improvements has been in how decisions are made before a flight. In the past, many of the decisions relied heavily on individual experience and judgment. While experience remains critical, it can also introduce variability, particularly when conditions are changing or crews are operating under pressure.

Many operators are now using structured risk assessment tools to evaluate factors like

weather, crew condition, landing environment and mission complexity. The tools are not complicated, but they provide a consistent framework for evaluating risk before launch.

Just as important, they create a moment to pause. Rather than reacting to the urgency of a request, crews are prompted to step back and assess the overall situation. The approach helps ensure decisions are based on a full risk picture, rather than a single factor.

Over time, the strategy has helped reduce "press-on" decisions, particularly in marginal conditions where risk can increase quickly. It has also improved communication among crew members, making it easier to discuss and confirm decisions before moving forward.

Night Operations & NVG Discipline

One area that has made a significant difference for air medical operators is how night operations are conducted.

Night vision goggles are now widely used in armed ops, but the improvement in safety has come from how they are integrated into the mission. NVGs are no longer treated as an added capability. They are part of standard operations, supported by defined weather minimums, clear procedures and consistent training.

The sector has also placed greater emphasis on recognizing and responding to deteriorating conditions, particularly in low visibility. Training for inadvertent IMC and maintaining discipline during night operations has become relatively consistent across programs. The result has been a more disciplined approach to night flight, with fewer situations where crews operate at the edge of their capability.

Technology, Situational Awareness & Communication

Advances in avionics and warning systems have also contributed to improved safety. Terrain awareness systems, synthetic vision and modern flight displays provide crews with more accurate and timely information than ever before. The tools have helped reduce the risk of controlled flight into terrain, which has historically been a significant factor in air medical accidents.

At the same time, units have a better understanding that technology alone does not improve safety. It must be supported by training and proficiency to be effective. When used correctly, the systems enhance situational awareness and support decision-making. Without proper proficiency, they can become a distraction.

The difference has come from the ways in which the systems are integrated into daily operations.

Crew coordination has also become more refined. Air medical units place increasing emphasis on the way pilots, medical crews and other personnel communicate during missions. Roles are more clearly defined, and expectations for communication are more consistent. The change has been particularly important for air medical operations, where multiple tasks take place at the same time. Clear communication helps ensure that critical information is shared and crews remain aligned, particularly when workload increases and conditions change.

The improvements are not always visible, but they play a significant role in how effectively crews manage their workload and maintain situational awareness.

Scenario-Based Training & Simulation

Air medical flight training is increasingly

reflective of real-world operations. Instead of focusing primarily on individual maneuvers, many programs use scenario-based training to replicate the conditions crews actually encounter. The missions include night operations, confined landing areas, changing weather and time-sensitive operations.

Simulation has played an important role. It allows crews to train for situations that would be difficult or unsafe to replicate in an aircraft, including emergency procedures and high-workload scenarios.

Real-world training helps crews develop the ability to manage multiple demands at the same time, a key factor in safe and effective flight operations. It allows crews to experience how communications and decisions are affected under realistic conditions.

A Concerted, Lasting Effort

Air medical units have also improved in their operational control and weather-related decision making. Flights are increasingly launched and monitored in a structured way, with clear processes for evaluating conditions and supporting crew decisions.

The approach includes improved access to weather information and increased visibility into decisions made across different operators. The practices help reduce the likelihood of crews operating in marginal conditions and support consistent decision making. Over time, the improvements have contributed to a disciplined approach to managing weather-related risk.

The safety improvements seen in air medical operations over the past two decades did not happen by chance. They are the result of a consistent effort to understand risk and apply practical solutions to manage it. While technology has played an important role, the most meaningful changes have come from how crews operate, how decisions are made, how communication is handled, and how discipline is maintained in day-to-day operations.

The practices should not be limited to dedicated air medical programs. They are applicable across all public safety aviation missions. Adopting these proven approaches to public safety's multi-mission reality would deliver safer operations across every mission type.

The opportunity moving forward is not to replicate any one system, but to continue applying the air medical field's proven approaches in a way that supports safe, consistent operations in any environment. ▀

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