



Federal Aviation
Administration

Air Ambulance Quality and Patient Safety Committee (AAQPS Committee) Meeting
Pre-Read and Reference Materials

Executive Summary

This document provides an overview of key air ambulance resources and guidelines and aims to equip AAQPS Committee members and the general public with the necessary background, data, and insights to guide the July 10, 2025, upcoming discussions on air ambulance quality and patient safety. The documents included are critical for understanding the current landscape of air ambulance services and the remaining recommendation discussions during the Clinical Standard and Flight Safety Subcommittee presentations.

Air ambulance operations are a critical component of emergency medical response systems, providing life-saving services to patients in remote or time-sensitive situations. As such, maintaining the highest standards of safety, clinical care, and operational efficiency is paramount.

Clinical Standards Resources

A Report of the Air Ambulance and Patient Billing Advisory Committee: The March 2022 report of the Air Ambulance and Patient Billing (AAPB) Advisory Committee, established under Section 418 of the FAA Reauthorization Act of 2018, provides a comprehensive review of issues related to air ambulance services and patient billing. The report also examines the impact of the No Surprises Act and explores potential amendments to the Airline Deregulation Act to address regulatory gaps. These recommendations are directed to Congress, federal agencies, states, air ambulance providers, and insurers/payors, with the goal of protecting consumers and fostering fair practices in the industry. The four recommendations below will be critical to review ahead of July 10 AAPB discussions. See link and specific sections referenced below:
<https://www.transportation.gov/sites/dot.gov/files/2022-03/2022.03.10%20AAPB%20report.pdf>

- **AAPB recommendation #12:** The Advisory Committee recommends that Department of Health and Human Services (HHS) should issue a regulation addressing medical necessity within the No Surprises Act Independent Dispute Resolution (IDR) process. Specifically, within the IDR process, there should be a rebuttable presumption that the air ambulance service was medically necessary, but an insurer can overcome that presumption by first presenting evidence. This evidence may show that either the third-party first responder/medical professional who requested the transport was not a neutral third party, or that the air ambulance provider did not act in good faith. (See Chapter 5, page 42)
- **AAPB recommendation #17:** The Advisory Committee recommends that legislation be enacted to require HHS to: (i) study Medicare rates for air ambulance services; and (ii) if warranted, for HHS to take steps to increase the reimbursement rates for air ambulance services upon conclusion of the study. The Advisory Committee also recommends that the study should be based on actual cost data, with “cost” including (1) the definition of cost as set forth in the Balance Billing Subcommittee’s recommendation; (2) cost elements set forth in Section 106 of the No Surprises Act; and (3) volume of transports. (See Chapter 9, page 60)
- **AAPB recommendation #22:** The Advisory Committee recommends that the Airline Deregulation Act (ADA) should not preempt State laws relating to licensing of medical services of air ambulance providers, even if they have incidental effect on prices, routes, and services. (See Chapter 11, page 69)
- **AAPB recommendation #14:** The Advisory Committee recommends that HHS and the Department of Transportation (DOT) collect data from air ambulance providers and suppliers regarding: (1) average cost per trip; (2) air ambulance base rates and patient-loaded statute mileage rates; (3) ancillary fees for specialty services; (4) reimbursement data aggregated by payor type and per transport, based on median rate and ZIP code, with data regarding private insurance further identified by provider type; (5)

alternate revenue sources (e.g., subsidies or membership programs) broken down per transport for reporting purposes; (6) volume of transports, segregated by aircraft type (fixed wing and rotary wing) and takeoff ZIP code for government purposes, or for public use when aggregated with other data; (7) market share for air transport, obtained from the FAA certificate holder and identifying the certificate holder’s parent company; and (8) market share for health care, by looking at the program type for the FAA certificate holder. (See Chapter 6, page 51)

Flight Safety Resources

The following pre-read materials support the Flight Safety Recommendation #6 and will be discussed at the July 10 AAQPS meeting:

1. **Safety Alert for Operators (SAFO) 19006:** This document is a Safety Alert for Operators (SAFO) issued by the Federal Aviation Administration (FAA) to inform registered owners and operators of helicopters about compliance standards for Crash Resistant Fuel Systems (CRFS). It outlines regulatory requirements, historical context, and recommended actions for improving safety in helicopter operations. The document highlights amendments to Title 14 of the Code of Federal Regulations (14 CFR) and Title 49 of the United States Code (49 U.S.C.), focusing on minimizing crash-induced fuel leaks, enhancing occupant egress time, and improving overall safety standards for rotorcraft. It also discusses the applicability of these standards to different categories of helicopters based on their manufacturing and certification dates. See link: <https://www.faa.gov/sites/faa.gov/files/2024-12/SAFO19006.pdf>
2. **Special Airworthiness Information Bulletin (SAIB) SW-17-31R2:** This bulletin issued by the FAA on December 5, 2019, provides information and recommendations to helicopter owners and operators regarding CRFS. It emphasizes the importance of adopting CRFS to reduce the risk of post-crash fires and improve occupant survivability in accidents. The bulletin highlights regulatory requirements, historical background, and statutory mandates, including the FAA Reauthorization Act of 2018, which established helicopter fuel system safety requirements under 49 U.S.C. § 44737 (2018). It also includes recommendations for pursuing CRFS installations and provides links to lists of compliant helicopters. See link: [FAA 12.4.19 SW-17-31R2.pdf](#)
3. **Rotorcraft Occupant Protection Working Group Task 5 Report:** This document is the final report submitted by the Rotorcraft Occupant Protection Working Group (ROPWG) to the Aviation Rulemaking Advisory Committee (ARAC) on March 15, 2018. It contains recommendations for incorporating CRFS regulations into newly manufactured rotorcraft certified before these regulations went into effect (legacy helicopters). The report also evaluates the cost-benefit analysis of partial and full compliance with CRFS regulations, along with recommendations for occupant seating and cabin restraint systems. The analysis is based on crash data, cost estimates, and performance penalties, with the goal of improving rotorcraft safety while minimizing industry disruption. See this [ROPWG Report Link](#) and specific sections referenced below.

Crash-Resistant Fuel Bladders and Adoption of Crashworthy Fuel Systems:

- Background on the effectiveness of crashworthy fuel systems and their incorporation into legacy helicopters. (See pages 7–9)
- Recommendations for 27/29.952(a)(1)(2)(3)(5)(6), 27/29.952(f), and 27.963(g)/29.963(b), including the drop test requirements and puncture resistance standards. (See pages 22–24)

Crash-Resistant Occupant Seating Standards (CRSS) and Enhanced Cabin Restraint Safety Measures:

- Introduction mentions the inclusion of emergency landing conditions and enhanced restraint systems for occupants and crash-resistant seating standards. (See page 7)
- Recommendations for enhanced cabin restraint safety measures and crash-resistant occupant seating are summarized. (See page 41)

4. **Rotorcraft Occupant Protection Working Group Task 6 Final Report:** The report is the final analysis of the ROPWG Task 6, submitted to the ARAC. It includes recommendations for rulemaking and other actions to improve occupant crash protection in previously manufactured helicopters. The document analyzes technical feasibility, costs, benefits, and recommendations for retrofitting crash safety features into the existing fleet of rotorcraft. Key areas addressed include CRFS, crash-resistant occupant seating, and enhanced cabin restraint safety measures. It also discusses legislative changes,

research studies, and industry incentives to improve crash safety. See this [ROPWG Report Link](#) and specific sections referenced below.

Summary of ROPWG Task 6 Recommendations: Page 70, Table 34

- Requiring the installation of crash resistant fuel bladders that meet the requirements of the 50-foot fuel cell drop test in or out of structure, and that demonstrate a minimum of 250 lb. puncture resistance. (27/29.952(a)(1)(2)(3)(5)(6), 27/29.952(f), and 27.963(g)/29.963(b))
- Requiring the installation of occupant seats that pass the vertical and horizontal dynamic seat tests of 27/29.562, 27/29.785(c) and (g).
- Requiring the restraint of occupants and items of mass in the cabin at the g-levels required for newly certified helicopters (27/29.561).

Crash-Resistant Fuel Bladders and Adoption of Crashworthy Fuel Systems:

- Appendix H: Pages 167–174.
- Mentioned in the Executive Summary as a critical recommendation. (See page ii)
- Overview of post-crash fire hazards and CRFS effectiveness. (See page 11)
- Cost-benefit analysis for CRFS retrofit requirements. (See page 41)
- Detailed discussion of the fuel cell drop test requirements and puncture resistance. (See page 55)
- Recommendation for retrofitting crash-resistant fuel bladders. (See page 72)

CRSS:

- Table 48: Pages 173–174.
- Highlighted as a recommendation to improve crash safety. (See page ii)
- Cost-benefit analysis for dynamic seat retrofit requirements. (See page 43)
- Discussion of dynamic seat test requirements. (See page 57)
- Recommendation for retrofitting upper torso restraints (shoulder harnesses). (See page 73)

Enhanced Cabin Restraint Safety Measures:

- Appendix H and Table 49: Pages 167–174.
- Mentioned as a recommendation for enhanced cabin safety and improve occupant safety. (See page ii)
- Cost-benefit analysis for improved retention retrofit requirements. (See page 45)
- Discussion of occupant and items of mass retention requirements. (See page 63)

5. **Helicopter Air Ambulance Collision with Terrain Report:** This document is the National Transportation Safety Board Aircraft Accident Report (NTSB/AAR-20/01) detailing the investigation into the January 29, 2019, fatal crash of a Bell 407 helicopter operated by Survival Flight Inc. near Zaleski, Ohio. The helicopter was conducting a helicopter air ambulance (HAA) flight under Title 14 Code of Federal Regulations Part 135 when it collided with forested terrain. The report emphasizes deficiencies in Survival Flight’s safety culture, risk management practices, and compliance with regulations, as well as the FAA’s lack of adequate oversight. It also discusses the need for improved weather tools and crash-resistant flight recorders to enhance safety in HAA operations. See this [Helicopter Air Ambulance Collision with Terrain Report Link](#) and specific sections referenced below.

- Specific section to reference includes pages 46–50 and 53–56, related to meteorology and terminal doppler weather radar.