Air ambulance transport

Clinical Policy ID: CCP.1091

Recent review date: 1/2026

Next review date: 5/2027

Policy contains: Air ambulance; medical helicopter; trauma care.

First Choice VIP Care has developed clinical policies to assist with making coverage determinations. First Choice VIP Care's clinical policies are based on guidelines from established industry sources, such as the Centers for Medicare & Medicaid Services (CMS), state regulatory agencies, the American Medical Association (AMA), medical specialty professional societies, and peer-reviewed professional literature. These clinical policies along with other sources, such as plan benefits and state and federal laws and regulatory requirements, including any state- or plan-specific definition of "medically necessary," and the specific facts of the particular situation are considered by First Choice VIP Care, on a case by case basis, when making coverage determinations. In the event of conflict between this clinical policy and plan benefits and/or state or federal laws and/or regulatory requirements, the plan benefits and/or state and federal laws and/or regulatory requirements shall control. First Choice VIP Care's clinical policies are for informational purposes only and not intended as medical advice or to direct treatment. Physicians and other health care providers are solely responsible for the treatment decisions for their patients. First Choice VIP Care's clinical policies are reflective of evidence-based medicine at the time of review. As medical science evolves, First Choice VIP Care will update its clinical policies as necessary. First Choice VIP Care's clinical policies are not guarantees of payment.

Coverage policy

Air ambulance transport is clinically proven and, therefore, may be medically necessary when both of the following criteria are met (Centers for Medicare & Medicaid Services, 2025):

- Either:
  - Transportation could not have been provided by ground vehicles.
  - Great distances and/or times from pickup point to destination are involved.
- The use of air ambulance is justified by the member's medical condition, including but not limited to intracranial bleeding, cardiogenic shock, burns requiring treatment in a burn center, diagnosis requiring treatment in a hyperbaric oxygen unit, multiple severe injuries, and life-threatening trauma.

Limitations

Air ambulance transport is not medically necessary for circumstances not meeting the above criteria, including but not limited to the following (Centers for Medicare & Medicaid Services, 2025):

- Transport from a facility providing a higher level of care to a facility providing an equivalent or lower level of care.
- Transport for personal or convenience purposes, such as a return home.
- Transport beyond the nearest facility equipped to provide the most appropriate care for the patient's condition.

Alternative covered services

Ground ambulance.

Background

Air ambulance service plays an important role in access to the appropriate medical services. Air ambulances, first used for wounded soldiers during warfare, involve transportation of patients by a fixed-wing plane (when distance is the major consideration) or rotary-wing helicopter (when speed is the most crucial concern). Operated by government agencies or private organizations, these vehicles must include specifications for medical use (Loyd, 2024).

Air ambulance services are an important extension of emergency medical service systems of care, particularly for connecting outlying communities and tertiary/quaternary referral centers for acute care, specialty care, and trauma medicine. Weather is the main limitation to air transport, but relative contraindications include certain patient conditions such as uncontrolled violence, sensitivity to altitude, and the ability of the crew to manage the patient and expected complications in a confined space with limited patient access (Loyd, 2024).

State-of-the-art medical equipment must be available for patient treatment, and personnel must be trained and meet certification. Staffing typically includes paramedics, emergency medical technicians, and sometimes physicians and nurses; the number and type of staff on particular flights can vary by patient condition (Centers for Medicare & Medicaid Services, 2025). Equipment can include ventilators, medications, electrocardiographs, cardiopulmonary resuscitation equipment, and stretchers, so that care may be rendered during the flight.

The federal government considers accreditation of air ambulance programs to be voluntary, but some states require accreditation to operate. The (voluntary) Commission on Accreditation of Medical Transportation Systems grants accreditation of air ambulance programs (Commission on Accreditation of Medical Transportation Systems, 2025).

Findings

Guidelines

The National Association of EMS Physicians, the American College of Emergency Physicians, and the Air Medical Physician Association updated a position statement on appropriate use and integration of air ambulance services. Patients may derive benefit from air medical services when (Lyng, 2021):

- Initiation or continuation of advanced or specialty care and expertise is not otherwise available from local hospital or ground emergency medical services resources.
- Expedited delivery of the patient to definitive care is required for time-sensitive interventions.
- Extraction, evacuation, and/or rescue from environments that are difficult to access due to geography, weather, remote location, distance, and other factors that limit timely access to a patient or transport by ground emergency medical services.

An American College of Surgeons guideline for field triage provides recommendations and a triage structure for civilian trauma systems in which maximal resuscitative care is appropriate. The recommendations do not apply to patients with limited goals of care. Recommendations for transport allow flexibility to account for the local variability in emergency medical services systems. The guideline provides situational criteria for directing who should be transported to the highest trauma level available within the geographical constraints of a regional trauma system, including consideration of air medical services. The benefit of air ambulance transportation is in reducing the time necessary to connect specialized care to the patient. Patients are most likely to benefit from air ambulance transport when (Newgard, 2022):

- Their condition is time-critical and early treatment can be provided.
- The level of care needed cannot be provided at the transferring facility.
- Ground transportation presents a risk to health and safety.
- The appropriate level of skill and equipment are available during transport.

Medicare regulations, first issued in 2009 and last updated in 2018, explain the medical necessity criteria for use of air ambulance transport. Air transport is justified if travel from pickup point to destination is not possible or very difficult using ground transportation – such as when water or mountains are situated between the two. Great distances or times (30 to 60 minutes or more) needed to move the patient also supports use of air transport, as does severity of certain conditions listed (Centers for Medicare & Medicaid Services, 2025).

Evidence review

The evidence consists of observational studies of low to moderate quality; outcome data from randomized controlled trials are absent. The evidence from systematic reviews and meta-analyses has attempted to quantify outcome benefits that support appropriate use of air ambulance emergency medical services. However, a lack of systematic indexing, heterogeneous data reporting, weak methodological design, complicated identification and comparison of incidents, and sub-standard systematic reporting hampered interpretation of findings (Johnsen, 2016). Patient age, diagnosis, injury severity, training of personnel, current triage guidelines, and speed of on-scene arrival can influence mortality outcomes (Michaels, 2019).

Air ambulance transport participants tended to be those whose conditions were more acute, who had higher severity levels, and who required more intervention than ground transport participants. The mortality rate of trauma patients was the most rigorously studied outcome. Comparisons of adjusted mortality rates yielded generally positive but mixed findings supporting air ambulance transport over ground transport, suggesting that other factors may be important in determining appropriate use of air ambulance services.

A study using National Trauma Data Bank data from 2007 to 2015 found the proportion of patients transported by a helicopter has decreased over time from 17.0% to 10.2% ($P < .001$) without a change in overall mortality ($P = .545$), suggesting utilization has become more appropriate, but more refinement is needed (Dhillon, 2018). More limited evidence suggests helicopter transport may improve other outcomes, such as expeditiously bridging remote regions to a stroke center for timely and effective thrombolytic therapy to improve neurologic outcomes (Florez-Perdomo, 2022).

To overcome deficiencies in published studies, a systematic review and meta-analysis applied data from 16 nonrandomized studies listed in the Helicopter Emergency Medical Services Outcomes Assessment Research Database. Each study used a natural experiment (i.e., real world) design to compare either outcomes before and after the availability of rotary-wing air medical transport or outcomes in which helicopter services were temporarily unavailable. The primary outcome of interest was survival to hospital discharge. Studies represented a range of diagnoses and disparate outcome measures, which precluded meta-analysis for all but four studies. In eight of 13 cohorts, helicopter emergency medical services were associated with outcomes improvement. A meta-analysis of four studies assessing trauma outcomes found helicopter services were associated with a 66% increase in survival odds (odds ratio 1.66, 95% confidence interval 1.23 to 2.22, $P < .01$) (Schoenfeld, 2024).

A systematic review and meta-analysis of 115 studies (n = 691,056) found the evidence was insufficient to determine an association between ambulance and helicopter emergency medical services response times and patient survival. The studies comprised adult and pediatric patients with out-of-hospital cardiac arrest, trauma, and drownings in various settings from around the world. The evidence was heterogeneous and of low quality, lowering any certainty in the findings (Hansen, 2025).

Among pediatric trauma patients, helicopter emergency medical services correlated with lower mortality (odds ratio 0.66, 95% confidence interval 0.59 to 0.74) (Enomoto, 2024). Some reports have not upheld the efficacy of

transporting patients by helicopter; one 10-year study of 14,405 traumatically injured children found that transport type was not associated with superior survival, intensive care unit length of stay, or discharge disposition. Notably, 22.3% of helicopter emergency medical services transfers were not significantly injured (Stewart, 2015).

In the setting of trauma, helicopter transport may be appropriate for patients with severe injury as defined by an Injury Severity Score > 15, but one systematic review and meta-analysis of nine studies reported a statistically significant survival benefit in helicopter emergency medical services in those with an Injury Severity Score > 8 compared to ground ambulance transportation. Authors surmised that restricting helicopter transport to patients with a higher Injury Severity Score threshold likely misses a survival benefit that could be realized in this subset of trauma patients with a lower Injury Severity Score (Fritz, 2024). In another analysis of 21 helicopter emergency medical services studies, the findings suggest a survival benefit associated with helicopter emergency medical services scene response for patients with severe head injuries, defined by a Glasgow Coma Score < 9 or Head Abbreviated Injury Score ≥ 3 (Fritz, 2025).

Alharbi (2025) summarized the results of 63 observational studies comparing the effect of ambulance transportation versus helicopter transportation on mortality for patients who experienced trauma. When data were adjusted for study origin (continent), injury classification, clinician's professional role, and direct transfers versus staged transfers to a treating trauma center, the results suggested a mortality advantage of air transport across all subgroups at various time points. In contrast, in North American populations, unadjusted analyses showed a preference for ground transport, while air transport was favored in cases of severe trauma. The authors stress caution in interpreting these results due to variations in study populations, injury severity, and potential differences in the catchment area.

In 2022, we updated the references and added a new study. No policy changes are warranted.

In 2024, we added two guidelines (Lyng, 2021; Newgard, 2022) and a systematic review/meta-analysis (Florez-Perdomo, 2022) to the policy. No policy changes are warranted.

In 2025, we updated the references and reorganized the findings section with no policy changes warranted.

In 2026, we updated the references with no policy changes warranted.

References

On December 9, 2025, we searched PubMed and the databases of the Cochrane Library, the U.K. National Health Services Centre for Reviews and Dissemination, the Agency for Healthcare Research and Quality, and the Centers for Medicare & Medicaid Services. Search terms were "air ambulance (MeSH)," "air ambulance," and "air transport." We included the best available evidence according to established evidence hierarchies (typically systematic reviews, meta-analyses, and full economic analyses, where available) and professional guidelines based on such evidence and clinical expertise.

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Policy updates

4/2014: initial review date and clinical policy effective date: 9/2014

4/2015: Policy references updated.

4/2016: Policy references updated.

4/2017: Policy references updated.

4/2018: Policy references updated.

4/2019: Policy references updated. Policy number changed to CCP.1091.

4/2020: Policy references updated.

4/2021: Policy references updated.

4/2022: Policy references updated.

1/2024: Policy references updated.

1/2025: Policy references updated.

1/2026: Policy references updated.

Related Codes

Below are the most commonly submitted codes for the service(s)/item(s) subject to this policy CCP.1091. This is not an exhaustive list of codes. Providers are expected to consult the appropriate coding manuals and bill accordingly.

Code	Code Description
A0430	Ambulance service, conventional air services, transport, one way (fixed wing)
A0431	Ambulance service, conventional air services, transport, one way (rotary wing)
A0435	Fixed wing air mileage, per statute mile
A0436	Rotary wing air mileage, per statute mile
S9960	Ambulance service, conventional air services, nonemergency transport, one way (fixed wing)
S9961	Ambulance service, conventional air service, nonemergency transport, one way (rotary wing)