



# AIR MEDICAL SERVICES (AMS) GUIDELINES

For all first responders and EMS agencies serving the  
Hudson Valley & Westchester EMS Regions

UPDATED JANUARY  
2021

Hudson Valley Regional  
EMS Council

[www.hvremSCO.org](http://www.hvremSCO.org)

Westchester Regional  
EMS Council

[www.wremSCO.org](http://www.wremSCO.org)



# TABLE OF CONTENTS

## CONTENTS

Contents .....	1
Introduction.....	3
First Responder Reference.....	4
Operational Criteria for Requesting Air Medical Services.....	4
Clinical Criteria for Requesting Air Medical Services .....	4
Auto-Standby Procedure.....	4
Procedure .....	5
Scene Proximity .....	6
Landing Zone Criteria .....	6
Marking the Landing Zone .....	6
Facility Intercept .....	7
Hazards Report .....	8
Personnel Safety at the Landing Zone .....	8
Loading / Unloading Patients and Passengers .....	8
Passengers.....	8
Patient Loading.....	9
Hot Loading.....	9
Cold Loading .....	9
Aircraft Overview.....	10
EC-145.....	10
EC-135.....	10
AS-350 ‘AStar’ .....	10
Bell 407 .....	11
AW-139.....	11
Facility Ratings Guide.....	15
Neonatal Centers.....	15
Stroke centers.....	15
Trauma centers.....	15
Estimated Time of Arrival .....	16

Auto-Standby Procedure.....	16
Landing Zone Safety.....	16
Ground Procedures.....	16
Hot Loading Requirements .....	17
Facility Hot Off-Load Requirements.....	17

# WELCOME

## INTRODUCTION

The Hudson Valley–Westchester Inter-Regional Helicopter Committee is an advisory group established by the Hudson Valley and Westchester Regional EMS Councils and the local Air Medical Services (AMS). This guideline is provided to all emergency service agencies: law enforcement, fire departments, emergency communication centers, and emergency medical services (EMS) in the lower seven counties of the Hudson River Valley (geographically north to south, west to east) – Sullivan, Ulster, Dutchess, Orange, Putnam, Rockland, and Westchester.

The helicopter is an air ambulance and an essential part of the EMS system. In today’s environment of increasingly scarce EMS resources, appropriate use of AMS is of the utmost importance. Adherence to the practices included in this guideline will help to ensure that the proper resources are provided to the right patients at the right time while maintaining safe and efficient EMS operations.

# FIRST RESPONDER REFERENCE

STANDARDS FOR FIRST RESPONDERS, FIRE DEPARTMENTS, EMS, AND EMERGENCY COMMUNICATION CENTERS (ECCS), WHEN UTILIZING AIR MEDICAL SERVICES.

## OPERATIONAL CRITERIA FOR REQUESTING AIR MEDICAL SERVICES

The following criteria will be considered prior to requesting a helicopter for a scene response:

1. The patient requires or would benefit from the critical care capability of the AMS resource.
2. No unnecessary delays in transport to a hospital are introduced.
3. A safe helicopter landing zone is available.

The following criterion will be considered prior to canceling a helicopter for a scene response:

1. Only the primary EMS transport care provider may cancel a responding helicopter and only after completing a primary and secondary assessment of the patient(s), except when the first responders on scene cancel all en-route ALS units.

## CLINICAL CRITERIA FOR REQUESTING AIR MEDICAL SERVICES

- Patient’s condition requires expeditious transport to a hospital capable of providing definitive care.
- Patient’s condition requires specialized services offered by the AMS crew, prior to arrival at the hospital.
- Patient is suffering from a, “life or limb” threatening condition demanding intensive multidisciplinary treatment and care.
- Unstable trauma patients as defined by the physiologic criteria of abnormal vital signs or by anatomical findings, and the auto-standby procedure criteria below.
- Critical burn patients as defined in the Trauma: Burn Care Consideration protocol.
- Acutely ill, unstable medical patients as defined in the medical protocols.

## AUTO-STANDBY PROCEDURE

The en-route time to a scene for AMS can be dramatically improved by dispatching the AMS resource at the time of initial ground resource dispatch. First Responders and ECCs will consider the following list for initiating an auto-standby of AMS as well as the ETA to definitive care by ground:

<ul style="list-style-type: none"><li>• Gas or other type explosion</li><li>• Structure fire with entrapment</li><li>• Severe burn injury</li><li>• All-terrain vehicle (ATV) or motorcycle crash</li><li>• Motor vehicle crash with ejection or entrapment</li><li>• Pedestrian struck</li></ul>	<ul style="list-style-type: none"><li>• Penetrating trauma</li><li>• Falls greater than 15 feet</li><li>• Partial or full limb amputation</li><li>• Pediatric trauma with altered mental status</li><li>• Mass casualty incidents</li><li>• Additional criteria deemed appropriate and agreed upon by the ECCs</li></ul>
---	--

## PROCEDURE

1. The ECC will contact the air medical dispatch center and request an auto-standby.
2. The ECC will notify responding Emergency Services that an AMS auto-standby has been requested.
3. Upgrading to a response:
  - a. In the event that additional information that meets criteria for AMS activation is gained from the reporting party or from first responders, the request to respond may be made prior to EMS arrival to the patient(s).
  - b. Upon completion of a primary and secondary assessment of the patient(s), the request to respond may be made by the primary EMS transport patient care provider.
4. Canceling the response:
  - a. In the event that the first responders are canceling all en-route ALS resources, the AMS resource may be canceled by the on scene fire department or primary BLS ambulance patient care provider.
  - b. When ALS is not being canceled, only the primary EMS transport patient care provider may cancel the AMS resource after completing the primary and secondary assessments of the patient(s).
5. Any change in request for AMS will be communicated to the ECC, including the reason for cancellation if such occurs.
6. The ECC will notify the air medical dispatch center as soon as a determination is made to respond or cancel the AMS resource along with the reason if canceled.
7. No costs will be incurred by any party for initiating an auto-standby request.

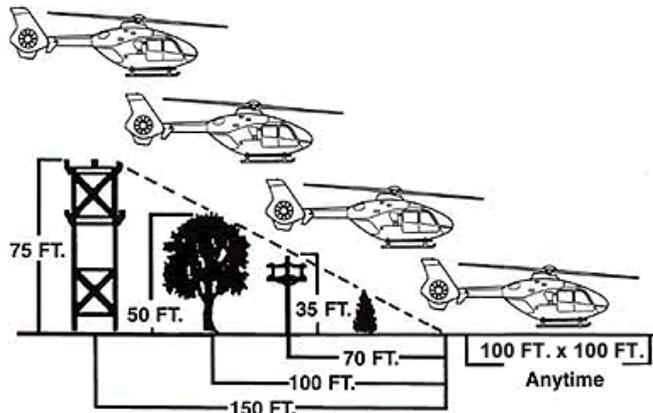
# LANDING ZONE SETUP

## SCENE PROXIMITY

The landing zone should be near the scene to limit delays in out-of-hospital time. The helicopter should land as close to the scene as possible and practical.

## LANDING ZONE CRITERIA

- 100 feet by 100 feet.
- Free of overhead obstructions such as:
  - Wires.
  - Highway markers.
  - Cranes.
  - Antennas.
- Generally level (slope should not exceed 5 degrees).
- On a firm surface:
  - Brush, grass, or weeds should be less than 24 inches high. A walk-through of these fields is encouraged to identify potential hazards prior to the helicopter arrival.
- Area is free of debris.
- Exercise caution in areas with unpacked snow, dust, or sand that may reduce visibility from rotor wash and communicate this information in your hazards report.
- No signs or posts in the landing zone.
- Able to maintain crowd control of bystanders.



## MARKING THE LANDING ZONE

- Place cones at the corners of the landing zone.
- A flashlight may be placed inside the cone for night scenes.
- Turn off white emergency lights at night.
- Headlights or floodlights aimed downward may be used to illuminate the landing zone.
- Consider placing emergency vehicles underneath nearby wires as appropriate for additional safety.

## FACILITY INTERCEPT

The use of a hospital helipad to rendezvous EMS and AMS does not trigger an Emergency Medical Treatment and Labor Act (EMTALA) obligation for the hospital; no evaluation or stabilization by the hospital is required for the patient to be transferred by EMS directly to AMS when appropriate.

When a hospital's helipad is determined to be the most appropriate landing zone to complete a field transfer of a patient from EMS to AMS, the ECC will notify the hospital as soon as possible.

# LANDING ZONE OPERATIONS

Landing zones at scenes, day or night, must be secure prior to the AMS pilot commencing an approach. Confirmation of a secured landing zone should always include two-way radio communication between the AMS pilot and ground personnel. If two-way radio communication is not available, the AMS pilot will visually check for landing zone security during the high reconnaissance maneuver.

## HAZARDS REPORT

On initial contact with the in-bound helicopter, the Landing Zone Command will offer a description of the landing zone to include nearby hazards, including:

- Type of surface.
- Vertical obstructions near the landing zone including wires, radio towers, antennas, poles, and fences.
- How the landing zone is marked.

## PERSONNEL SAFETY AT THE LANDING ZONE

- Stay at least 50 feet from the aircraft.
- Do not approach the aircraft unless instructed to do so by the AMS crew.
- Stay in the pilot's view at all times when approaching or leaving the aircraft.
- Do not walk behind the helicopter.
- Do not approach the tail rotor.
- Do not raise anything above your head in the landing zone.
- Do not open or close aircraft doors.
- Do not enter the landing zone with any vehicle.

## LOADING / UNLOADING PATIENTS AND PASSENGERS

It is preferred for the AMS crew to receive a patient report and evaluate the patient in the ground ambulance when possible. This allows for a more controlled environment to transfer patient care and avoid missed information due to scene or landing zone distractions. Do not enter the landing zone with the ambulance or any other vehicles unless directed to by the AMS crew.

## PASSENGERS

The AMS crew will determine whether a passenger may accompany the patient during transport. The AMS crew will assist any passenger in entering the aircraft.

## PATIENT LOADING

Different aircraft have different patient loading configurations; specifically, rear-loading and side-loading. Follow the AMS crew's instructions when assisting in on-loading or off-loading the stretcher.

The rear-loading aircraft utilize clamshell doors and traditional wheeled stretchers. Closely follow all AMS crew directions, and never approach the tail rotor of the helicopter.

The side-loading aircraft use a non-wheeled sled stretcher that rotates into the helicopter after being latched in place. The sled can be placed on top of a ground EMS stretcher move with the patient.



**REAR-LOAD CONFIGURATION WITH CLAMSHELL DOORS.**



**SIDE-LOAD CONFIGURATION WITH SLED STRETCHER.**

## HOT LOADING

Hot loading is when the AMS crew decides to leave the helicopter engines running and the rotors spinning while patient report is received, assessments and interventions are performed, and the patient is loaded into the helicopter. Hot loading may be utilized in helicopters with prolonged engine start times, various weather scenarios, due to scene configurations, or at the pilot's discretion. Carefully follow all AMS crew instructions prior to assisting the AMS crew in hot loading a patient.

## COLD LOADING

Cold loading is when the AMS crew decides to shut down the helicopter at the scene and the rotors stop spinning while patient report is received, assessments and interventions are performed, and the patient is loaded into the helicopter. Cold loading may be utilized in helicopters with rapid engine start times, due to scene configurations, or at the pilot's discretion. Carefully follow all AMS crew instructions prior to assisting the AMS crew in cold loading a patient.

## AIRCRAFT OVERVIEW

The following aircraft are utilized in the Hudson Valley and Westchester EMS Regions.

### EC-145



Max Speed | 120 knots

Running Length | 43 feet

Twin Engine

Rear-Loading

### EC-135



Max Speed | 155 knots

Running Length | 40 feet

Twin Engine

Rear-Loading

### AS-350 'ASTAR'



Max Speed | 155 knots

Running Length | 43 feet

Single Engine

Side-Loading

## BELL 407



Max Speed | 140 knots

Running Length | 42 feet

Single Engine

Side-Loading

## AW-139



Max Speed | 140 knots

Running Length | 54 feet

Twin Engine

Side-Loading

# AIR MEDICAL BASES BY AGENCY

NOTE: The location of each base of operation is being provided to offer an understanding of the distances covered by each base. When Air Medical Services are requested to the scene, the CLOSEST available helicopter will be dispatched to respond to the emergency. Depending on factors such as weather conditions at the base or a commitment to another mission, local services may be unavailable and a service from outside of the area may be the closest resource.

<b>BASE</b>	<b>SERVICE</b>	<b>LOCATION</b>	<b>AIRCRAFT</b>
LifeNet Air 2	Air Methods	Kobelt Airport Wallkill, NY (Ulster)	EC-145
LifeNet 7-5	Air Methods	Garnet Health Medical Center – Harris, NY (Sullivan)	AS-350
LifeNet 7-1	Air Methods	South Albany Airport Selkirk, NY (Albany)	EC-135
Hackensack UMC AirMed 1	Air Methods	Greenwood Lake Airport West Milford, NJ	EC-135
Atlantic Air One	Atlantic Ambulance / Atlantic Health System	Netcong, NJ	EC-135
North Star	New Jersey State Police / University Hospital	Somerset Airport Somerset, NJ	AW-139
Life Star 2	LifeStar	Hartford Hospital Hartford, CT	EC-145
SkyHealth <i>Interfacility to Yale / Bridgeport Only*</i>	Yale New Haven Hospital / Northwell Health System	Bridgeport Hospital Bridgeport, CT	EC-135

# RECEIVING HOSPITAL CAPABILITIES

		HELIPAD	TRAUMA	PEDS TRAUMA	BURN	PEDS ICU	NEONATAL ICU	OBSTETRICS	PCI / CATH LAB	STROKE	RE-IMPLANTATION	VENTRICULAR ASSIST DEVICE	HYPERBARIC
<b>DUTCHESS COUNTY</b>													
Facility Name	Location												
MidHudson Regional Hospital of WMC	Poughkeepsie	+	2							P			+
Northern Dutchess Hospital	Rhinebeck									P			
Vassar Brothers Medical Center   Nuvance	Poughkeepsie	+	2				3	+	+	T	+		
<b>ORANGE COUNTY</b>													
Bon Secours Community Hospital	Port Jervis												
Garnet Health Medical Center	Middletown	+	2				2	+	+	P			
Keller Army Community Hospital	West Point												
Montefiore St. Luke's Cornwall Hospital	Newburgh	+	3				3	+	+	P			+
St. Anthony Community Hospital	Warwick												
<b>PUTNAM COUNTY</b>													
Putnam Hospital Center	Carmel									P			
<b>ROCKLAND COUNTY</b>													
Good Samaritan Hospital	Suffern	+					2	+	+	P			+
Montefiore Nyack Hospital	Nyack		3				2			P			
<b>SULLIVAN COUNTY</b>													
Garnet Health Medical Center - Callicoon	Callicoon	+											
Garnet Health Medical Center - Catskill	Harris	+								P			
<b>ULSTER COUNTY</b>													
Ellenville Community Hospital	Ellenville	+											

		HELIPAD	TRAUMA	PEDS TRAUMA	BURN	PEDS ICU	NEONATAL ICU	OBSTETRICS	PCI / CATH LAB	STROKE	RE-IMPLANTATION	VENTRICULAR ASSIST DEVICE	HYPERBARIC
Health Alliance of the Hudson Valley	Kingston							+	+	P			
<b>WESTCHESTER COUNTY</b>													
Hudson Valley Hospital Center	Cortlandt Manor						2	+		P			
Montefiore Mount Vernon Hospital	Mount Vernon									P			
Montefiore New Rochelle Hospital	New Rochelle						3			P			
New York Presbyterian / Lawrence Hospital	Bronxville						2						
Northern Westchester Hospital	Mt. Kisco						3			P			
Phelps Memorial Hospital	Sleepy Hollow												
St John's Riverside Hospital - Andrus Pavilion	Yonkers												
St John's Riverside Hospital - Dobbs Ferry Pavilion	Dobbs Ferry						2						
St Joseph's Medical Center	Yonkers												
Westchester Medical Center	Valhalla	+	1	1	+	+	R	+	+	C	+	+	+
White Plains Hospital Center	White Plains						3	+	+	P			
<b>OUT OF REGION</b>													
Albany Medical Center	Albany	+	1	2		+	R	+	+	C	+	+	+
Jacobi Medical Center	Bronx	+	1	2	+	+	3	+	+	C	+	+	+
Sharon Hospital	Litchfield County, CT	+											
Danbury Hospital	Danbury, CT	+	2				3	+	+	P			

## FACILITY RATINGS GUIDE

Information is adopted from the New York State Health Profiles website.

### NEONATAL CENTERS

- **R** Regional Perinatal Centers: Capable of providing the highest level of care and operate NICUs.
- **3** Level 3: Capable of providing care for patients requiring increasingly complex care and operate NICUs.
- **2** Level 2: Capable of providing care to women and newborns at moderate risk and operate NICUs.
- **1** Level 1: Capable of providing care to normal and low-risk pregnant women and newborns. They do not operate NICUs.

### STROKE CENTERS

- **P** Primary Stroke Center: Capable of treating acute ischemic stroke with IV t-PA and comprehensive supportive care.
- **T** Thrombectomy: Capable of treating large vessel occlusions with intracranial endovascular intervention.
- **C** Comprehensive Stroke Center: Capable of treating subarachnoid intracerebral hemorrhage with neurosurgical services.

### TRAUMA CENTERS

- Trauma centers are additionally categorized by the availability of pediatric resources. “Pediatric Trauma Center” is a Level 1 or Level 2 trauma center and is a facility that is capable of providing comprehensive pediatric trauma care to pediatric trauma patients.
- **1** Level 1: Capable of providing the full range of services required of trauma patients, conducts trauma research, and provides training to surgical residents.
- **2** Level 2: Capable of providing comprehensive trauma care.
- **3** Level 3: Capable of providing prompt assessment, resuscitation, emergency operations, and stabilization of trauma patients.
- **4** Level 4: Capable of providing initial evaluation and stabilization of trauma patients prior to transfer to a higher level trauma center.

# GUIDELINES FOR AMS PROVIDERS

## ESTIMATED TIME OF ARRIVAL

When a response request is received, the air medical dispatch center will issue an estimated time of arrival (ETA) to be communicated to responding ground resources so that a timely determination on the most appropriate means of transport can be made. The ETA communicated is the time that the helicopter is in position over the scene, preparing to land. An updated ETA should be communicated by the air medical dispatch center when the helicopter is airborne. As the helicopter nears the scene, the AMS crew will attempt to contact ground personnel for a landing zone hazards report and patient update.

## AUTO-STANDBY PROCEDURE

In order to limit delays in patient care and transport, the auto-standby procedure will be used for rapid access to Air Medical Services in the Hudson Valley and Westchester EMS regions.

1. Upon request to place AMS on standby, the air medical dispatch center will determine the estimated distance in nautical miles from the assigned aircraft to the incident scene.
2. If the incident scene is greater than or equal to twenty five (25) nautical miles away from the assigned aircraft, the helicopter will launch in the direction of the incident and notify the ECC that they are on an auto-launch.
3. As soon as responding ground resources on the scene determine whether AMS is needed, the requesting ECC will notify the air medical dispatch center to respond or cancel. The reason for cancellation will be communicated as available.
4. If AMS arrives in the area of the scene prior to the decision by responding ground resources, the helicopter will maintain a holding pattern a safe distance from the scene pending notification to land or depart.

## LANDING ZONE SAFETY

Landing zone scenes, day or night, must be secure prior to the AMS pilot commencing an approach. Confirmation of a secured landing zone should always include two-way radio communication between the AMS pilot and ground personnel. If two-way radio communication is not available, the AMS pilot will visually check for landing zone security during the high reconnaissance maneuver.

## GROUND PROCEDURES

To maintain a safe environment when operating at a landing zone, one of the following procedures will be observed:

- Aircraft Shutdown: At any time when the security of the scene is in question and/or no positive crowd control is actively in place, one AMS crew member will remain in the vicinity of the aircraft and provide scene security until the AMS pilot shuts down the aircraft.
- Ground Idle / Reduced Power: If the scene is appropriately secured and circumstances including weather, location, AMS pilot discretion, and/or patient condition require a hot load,

the aircraft power will be reduced to a ground idle or a reduced power setting as specified in the aircraft flight manual. Altitude / Auto Trim mode will be off and SAS mode selected if appropriate. The AMS pilot will remain in the cockpit and a trained AMS crewmember or appropriately briefed First Responder will guard the area around the aircraft.

- The briefing for a First Responder charged with guarding a hot loading aircraft will include:
  - Stay at least 50 feet away from the aircraft.
  - Do not allow anyone to approach the aircraft without permission from the AMS pilot or an AMS crewmember.
  - AMS crew will assign personnel to help carry the stretcher to the aircraft.
  - Exit from the same direction that you approached the aircraft.

A tail rotor guard may be utilized: this individual will be briefed by the AMS Pilot in Command (PIC) or properly trained AMS crewmember. However, the PIC retains responsibility for safety around the aircraft; this responsibility cannot be delegated.

## HOT LOADING REQUIREMENTS

In the event of a hot load, the following is required:

- The rotor tip path plane is level.
- IV poles and other equipment are at head height or lower.
- The controls are secure.
- The autopilot is off (if installed).
- The force trim is on (if installed).
- Engine RPM is at ground idle.

## FACILITY HOT OFF-LOAD REQUIREMENTS

When the AMS pilot and crew determine a hot off-load is required at the receiving facility, the following procedures will be observed:

- The receiving facility is notified en-route that a hot off-load will be performed.
- A member of the AMS crew must be in position at the tail rotor prior to hospital personnel approaching the aircraft.