

## LifeFlight Standard Operating Procedure

### Helipad Operations

Effective Date November 2019  
Approval Date November 2019  
Supersedes September 2016

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#### I. Purpose:

Helipad operations occur in accordance with this standard operating procedure to ensure safe and efficient operations.

#### II. Specific Information:

- A. Only Vanderbilt LifeFlight helicopters land on the inner pad at Vanderbilt University Medical Center (VUMC) due to structural turbulence from winds impacting the building elevation on the north side of the helipad.
- B. Civil air medical programs carry aircraft liability insurance with a limit of liability of \$30,000,000 for each occurrence. The LifeFlight Air Medical Transport Program Director is provided a copy of the Certificate of Insurance and is immediately notified in the event of a policy change or cancellation.
- C. The pilot remains available to relocate the aircraft immediately after off-loading, if it deemed necessary by LifeFlight Office of Emergency Communications (VECOMM).
- D. When a U.S. Army Blackhawk helicopter lands on the Skyport at VUMC, it may land perpendicular to the inner pad. In this position, the Blackhawk's rotor blades are spinning dangerously low at the location one would enter or exit the helipad using the center metal stairway. This stairway is not used to access the helipad until the Blackhawk is completely shut down.
- E. Communications
  1. VECOMM is advised by phone or by radio at least 20 minutes prior to landing to request permission to land.
  2. All landings and departures are coordinated through VECOMM to ensure that all pilots are aware of the landing and departure intentions of the other aircraft.
  3. Arrivals: Air medical programs contact VECOMM on radio frequency VHF air 122.975 at twenty nautical miles from the helipad, at ten nautical miles from the helipad, at five nautical miles from the helipad, and on final to the helipad to ensure that the helipad and any cranes (if applicable) are secured.
  4. Departures: Air medical programs contact VECOMM on radio frequency VHF air 122.975 prior to departure and at 5 nautical miles from the helipad.
- F. Multiple aircraft
  1. When the outer pad at VUMC is occupied and aircraft are inbound, the aircraft on the outer pad may be asked to reposition to the helipad at Monroe Carell Jr. Children's Hospital at Vanderbilt (MCJCHV) helipad or John Tune airport.
  2. When the need for triaging patients exists, VECOMM makes the triage decision based on information provided by the medical crews of the inbound aircraft. VECOMM personnel may need to consult with medical control if the proper decision is not evident.

3. If at any time the pilots or medical crew determine it to be unsafe to reposition the aircraft due to time constraints or inability to prepare for departure in time for inbound aircraft, the inbound aircraft may be delayed or diverted elsewhere.
  4. When an aircraft checks in with an ETA of 20 minutes or less and both helipads are occupied, VECOMM informs them that the helipad is currently occupied and they may anticipate being diverted.
  5. If an aircraft is required to divert, every effort is made to assist them in picking up their medical crew members. Air medical programs are responsible for arranging ground transportation for their patient(s) if diversion is required.
- G. Patient unloading
1. Medical flight crews take responsibility for unloading patients from their helicopter.
  2. If unloading assistance or medical assistance is needed, flight crews request assistance through VECOMM as soon as possible prior to landing. If the Helipad Transport Team (HTT) is not available, VECOMM staff may assist the flight crew with unloading patients from the aircraft as workload allows. If workload does not allow VECOMM staff to assist, the coordinator contacts the Emergency Department or other appropriate assistance to respond to the helipad. VECOMM should anticipate the need for assistance for balloon pump, Level 1 trauma patients, and all intubated patients.
  3. For bariatric patients, the ratio of one person per patient's 100 pounds of weight is used to request assistance for off-loading the patient.
  4. Hot off-loads are not performed without the expressed permission of VECOMM. Vanderbilt LifeFlight air medical crew members may assist with the hot-off load if the airframe is a like-type of aircraft within the LifeFlight program. If Vanderbilt LifeFlight staff are not available to assist with the hot-off load, the air medical program performs the hot off load without assistance. Other VUMC staff do not assist with hot off-loads. Staff utilize appropriate protective equipment such as hearing and eye protection during hot off-loads.
  5. If a visiting aircraft crew requests medical assistance from a Vanderbilt team member or a Vanderbilt team member identifies specific interventions that the patient requires, that Vanderbilt team member assumes primary responsibility for the patient's care. The Vanderbilt medical team member receives report from the transporting service. Although the Vanderbilt team member has assumed primary responsibility for patient care, the transporting service accompanies the patient to the receiving area and give a full beside report whenever possible.
  6. There is a transport stretcher and an oxygen cylinder with adequate oxygen for patient transport available to transporting services. Under these stretchers, there is basic resuscitative equipment consisting of a self-inflating resuscitation bag, mask, and suction device (either mechanical or electrical).

- H. Aircraft utilizing the helipads at VUMC and/or MCJCHV that are operating under visual flight rules follow weather minimums for class G airspace set by the Federal Aviation Administration.
- I. Wind conditions
  - 1. All aircraft approaching the Skyport are notified by VECOMM when sustained winds are 20 knots or higher and when a 15 knot gust spread has recently occurred.
  - 2. The helipad is closed to any non-Vanderbilt aircraft when winds are sustained at 35 knots or more and/or there is a 15 knot gust spread. VECOMM notifies the Air Medical Transport Administrator on Call when the helipad is closed to non-Vanderbilt aircraft due to wind conditions.
  - 3. Any aircraft positioned on the helipad before adverse wind conditions exist are notified by VECOMM when such conditions develop.
  - 4. The option to utilize the inner pad at VUMC helipad by LifeFlight aircraft during high or gusty wind conditions is at the discretion of the pilot in command of the aircraft.
  - 5. If any crew member is uncomfortable with any wind speed or gust spread, the crew has the discretion to land at an airport or ground helipad.
- J. Revocation of privileges of use
  - 1. Failure to comply with these guidelines results in the immediate revocation of the privileges to use Vanderbilt helipads.
  - 2. If permission to land is denied by VECOMM, a written report is submitted to the Communications Manager before the end of the shift. The Communications Manager submits this report along with other supporting documentation to the LifeFlight Program Directors and Administrative Director. The report contains the following elements:
    - a. Service involved;
    - b. Date and time;
    - c. AWOS weather at both KBNA and KJWN airports; and
    - d. Visual weather check by using one of the following tower landmarks within a 1 mile radius of VUMC:

Tower	Location	Latitude	Longitude	Elevation (Above ground level)
LifeFlight	Skyport	36°08'33"N	86°48'03"W	168 ft
VUMC MCN	21 <sup>st</sup> Avenue	36°08'41"N	86°48'03"W	168 ft
Metro OEM	Compton Ave	36°07'48"N	86°47'28"W	213 ft
Vanderbilt Plaza	2100 West End	36°09'02"N	86°48'06"W	158 ft
Belmont	Belmont Blvd.	36°08'52"N	86°47'40"W	198 ft
St. Thomas Midtown Hospital	2000 Church St	36°09'15"N	86°48'10"W	155 ft
Mediatel	1101 Edge Hill	36°08'34"N	86°47'12"W	176 ft
Teletouch	612 West Ave	36°15'00"N	86°44'18"W	183 ft

Centennial Medical Ctr	230 25 <sup>th</sup> Ave North	36°08'41"N	86°48'34"W	155 ft
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K. Helipad closures

1. When a Vanderbilt helipad is closed, the following are notified:
  - a. VUMC Administrative Coordinator;
  - b. MCJCHV Administrative Coordinator;
  - c. LifeFlight Air Medical Administrator On Call;
  - d. LifeFlight Ground Administrator on Call; and
  - e. LifeFlight PR Manager.
2. Notifications continue every 12 hours (7a and 7p) while the helipad is closed, and when the helipad is re-opened.
3. Air medical services are directed to utilize an alternate landing area such as another Vanderbilt helipad or airport while the helipad is out of service.
4. VECOMM coordinates any medical assistance, patient transport services, ambulance transport or other assistance needed to move a patient to the receiving hospital while a Vanderbilt helipad is out of service.

L. Aircraft refueling:

1. All helicopters operated by Air Methods may refuel at Vanderbilt.
2. Fuel can be provided to any air medical service that needs to add fuel to safely fly the aircraft to the nearest airport where fuel services are provided.
3. Refueling is not permitted with lightening or thunderstorms within 5 nautical miles of the helipad.
4. Aircraft are refueled by the pilot in command of the aircraft.
5. If the pilots have any difficulty with the refueling system, they may contact VECOMM at 615-322-3211. VECOMM notifies Plant Ops of any malfunctions with the fueling system.
6. VECOMM may request aircraft to relocate prior to refueling (due to other aircraft arriving, etc.).

M. Helipad Visitors

1. All visitors or guests on the helipad must be accompanied by a member of the LifeFlight staff. Visitors cannot interfere with the egress of the patient from the helipad.
2. VECOMM must be notified in advance for all non-LifeFlight staff to visit the helipad.
3. Contact Vanderbilt University Police Department (VUPD) for any unauthorized personnel on the helipad. Unauthorized personnel/visitors on the pad must be immediately escorted off.
4. All personnel remain inside the building either in the crew ready area or behind the double glass doors on the helipad level during take-off and landing of any aircraft.
5. Loose items (e.g., ball caps, tripods, camera bags, clip boards) must be secured prior to leaving the crew area or the elevator entrance area behind the glass doors to the helipad.

6. Media:
  - a. Personnel from the Office of News and Communications must contact VECOMM prior to visiting the helipad. VECOMM then notifies the LifeFlight PR Manager.
  - b. If news media contacts VECOMM first, then VECOMM notifies the LifeFlight PR Manager. The LifeFlight PR Manager notifies Vanderbilt News and Communications and the LifeFlight Program Director.
  - c. If there is a request to film the off-loading of an aircraft, the on-board medical crew is notified. If the medical crew deems it to be inappropriate for the news media to film, they may deny the request.
  - d. At least one of the following VUMC personnel accompanies media to and from the helipad:
    - i. A LifeFlight team member;
    - ii. A News and Communications staff person;
    - iii. A Helipad Transport Team staff person; or
    - iv. VUPD.
  - e. No media is allowed on the helipad itself during aviation operations.
  - f. At night, media are not to use bright lights to film until after an aircraft begins to power down.
  - g. Film crews may not accompany the medical crew and patient beyond the helipad. Film crews may not follow the medical crew into the ED unless ED management or ED charge nurse has granted approval.
  - h. The Flight Crew may not make statements to the news media without prior approval of the LifeFlight Program Manager or LifeFlight PR Manager, and the News and Communications representative.
- N. Crane Operations
  1. VECOMM maintains radio communication with cranes operating around VUMC and MCJCHV to insure safe aircraft approach and departure to helipads. Pilots approaching the helipad have discretion to request that the crane(s) be repositioned if they feel approach/departure safety is a concern.
  2. All crane operators will be notified via radio 20 minutes prior to an aircraft landing and 3-5 minutes prior to departing the VUMC or MCJCHV helipad. Advanced notice is required because cranes may be in mid lift and unable to immediately lower or may have a lift scheduled that will need to be delayed until after the aircraft lands. During VFR conditions, the crane may continue operations and cease work and movement 3 minutes prior to landing.
  3. Crane operations are suspended when an aircraft is on an IFR flight to VUMC.
  4. The crane swings away from the helipad and out of the primary approach and departure. Boom cranes are required to lower (wind conditions permitting) for approaching aircraft. Boom cranes are not

required to lower for departures at night or under IFR conditions from the helipads. If wind conditions do not allow the boom crane to lower, the aircraft pilot in command approaching Vanderbilt will be advised and that pilot in command determines if safe landing can be accomplished with the boom crane in an upright position. All cranes are required to hold a stationary position until the aircraft safely lands or departs the helipad.

5. The crane operators are notified when it is safe to resume operations.
6. Prior to approach and depart of a visiting aircraft the updated script is read to the pilot in command by VECOMM to ensure that the most current crane information is adequately disseminated.
7. If a helipad must be closed due to crane work, any inbound aircraft is given this information as soon as possible. They have the options to land at alternative Vanderbilt helipads or at off-campus helipads or airports. The helipad will only be closed for the duration of time the crane is working close to the helipad and safe aircraft operations are not possible.
8. If a black hawk or aircraft of this size will be landing on a Vanderbilt helipad, this is clearly communicated to the crane operator. This allows the construction crews working at roof top level to be aware of potential risk of blowing debris.

### III. Procedures:

- A. Aircraft Refueling Procedure:
  1. Using the fuel pump's grounding cable, bond the aircraft by connecting the cable's clamp to the aircraft's designated bonding point.
  2. Reset the main meter to zero with the white button. Set desired fuel quantity with black buttons.
  3. Extend sufficient fuel hose and length of black cable from the deadman's control handle to reach the aircraft.
  4. Before removing the fuel cap, connect the bonding cable from the fuel nozzle to the aircraft.
  5. The deadman's control handle must be held and lever squeezed while pumping fuel or else the pump will shut off – DO NOT TIE THE HANDLE CLOSED.
  6. After the aircraft is refueled, recap the fuel tank before disconnecting the fuel nozzle bonding cable.
  7. Return all cables and the hose to the fuel box, turn off the main power switch and make sure the door is secure.
- B. For any unauthorized visitors on the helipad, document the following information and send to Program Director:
  1. Date and time;
  2. Name and title of investigating personnel sent to the helipad;
  3. Unauthorized personnel name and title;
  4. Circumstances and description of event; and
  5. Date and time when incident was communicated to the Program Director.

- C. Inbound script for aircraft during crane operations:
  - 1. Give wind speed and direction.
  - 2. Give the crane position and operation status.
  - 3. Advise if crane is secure in present position or in weathervane mode.
  - 4. Advise permission to land at pilot's discretion.
- D. Departing scrip for aircraft during crane operations:
  - 1. Give wind speed and direction.
  - 2. Advise if crane is secure in present position or in weathervane mode.
  - 3. Advise permission to depart at pilot's discretion.

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