

VIRGINIA COMMONWEALTH UNIVERSITY HEALTH SYSTEM
MCV HOSPITALS AND MCV PHYSICIANS
POLICY AND PROCEDURE MANUAL

SUBJECT:	POLICY NO.:	4213.01
	APPROVED DATE:	02/13/09
Helipad Operations	EFFECTIVE DATE:	03/13/09
	REVIEWED DATE:	01/01/09
	SUPERSEDES NO.:	4213.00

I. PURPOSE:

To establish guidelines for safe and efficient use of the Virginia Commonwealth University Health System (VCUHS) helipads.

II. POLICY:

Patients being transported to VCUHS via Air Medical Transports are at high risk, thus, a coordinated effort between inbound helicopters and the VCU Health System (VCUHS) is essential. Further, the transition of care of these patients also poses risk to the crews and the staff participating in this transfer of care, therefore, compliance with specific requirements for the transporting agency and the receiving facility as well as adherence with detailed approach procedures is critical.

III. DEFINITIONS:

COLD OFF-LOAD - the process of removing patients or equipment while the rotors are not moving.

HOT OFF-LOAD - the process of removing patients or equipment while the rotors are turning and the engine(s) are at idle.

INBOUND FLIGHT - travel of a helicopter towards the VCUHS with the intent of landing.

OUTBOUND FLIGHT- travel of a helicopter to a scene or hospital to pick up a patient intended for return to VCUHS.

PRIMARY HELIPAD- the rooftop helipad, located on top of the Main Hospital building of MCV Hospitals of VCUHS at latitude **37°32'.39"N.**, longitude **77°25'.81"W.** with a **12,000 lb weight limit and a 96 foot clearance.** In addition, 180 ft, North and slightly west of the helipad is the elevator tower for the Critical Care Hospital Building. This tower should be considered when approaching the pad from the north-west

SECONDARY HELIPAD (I-LOT) - the remote surface helipad at latitude **37°32'.86"N.**, longitude **77°25'.82"W.** exists

PENTHOUSE - the structure adjacent to the Primary Helipad utilized for VCUHS Response Team staging, fire control, and communications.

RESPONSE TEAM - Team consisting of Safety and Security Department and Emergency Department (ED) personnel trained in helipad operations and safety, who receive the Inbound Flight helicopter at the primary pad.

COMMUNICATIONS ROOM - The room located within the triage area of the Emergency Department utilized for communications with all Emergency Medical Services (EMS) crews and Helicopter traffic.

Contact by phone: **804-828-3989.**

Contact by radios: Med 9:	Rx 462.950	LifeCom: Rx 453.125	Hear: Rx 155.340
	Tx 467.950	Tx 458.125	Tx 155.340
	Tone 192.8	Tone 192.8	

IV. Procedures

A. Safety Requirements

1. The safety of Response Team personnel will take priority
2. At no time will the VCUHS Response Team unload a patient during the aircraft shutdown process. The rotor blades must come to a full stop prior to approaching the aircraft unless performing a Hot Off-load.
3. Personnel who have not been trained, or who have not demonstrated competency must remain inside the Penthouse during aircraft operation.
4. Personal Protective Equipment (PPE) and gear available to the Response Team include: hearing protection, goggles/eye protection, gloves, and gowns. Gowns and hair coverings will not be worn during Hot Off loads. Shoe covers will never be worn to the helipad.
5. Infractions of these policies will result in the notification of employee's supervisor.

B. Training Requirements

1. In accordance with VCUHS Policy 2152.00 Training and Competency, only VCUHS staff with documented and demonstrated competency will approach any helicopter or respond to the helipad. No minors (who are not patients) will be allowed to the helipad.
2. Exceptions: employees orientating to helipad operation and Special Operation Combat Medics with appropriately trained staff.
3. Educational and Safety program will be developed by Life Evac1 with input from Emergency Department communications and safety and will be used throughout the organization. Helipad competencies will be reviewed yearly by all staff involved with helipad operations.
4. Documentation of these trainings and competencies will be maintained in individual personnel training folders.

C. Equipment Requirements

1. Penthouse - Medical Equipment stored in the Penthouse will include 2 stretchers, each with full oxygen tank, gloves, and disposable suction device. A Stryker evacuation chair.
2. Elevator - Automated Electropulse Device (AED)

D. Air Medical Requirements

1. Administrative - ALL civil air medical vendors landing helicopters on VCUHS helipad must have a minimum of \$25 Million per occurrence in liability coverage with VCU Health System named as "an additional insured." The Department of Risk Management for VCUHS will be provided a copy of the Certificate of Insurance and will be immediately notified in the event of policy change or cancellation.
2. Communication -
 - a. All inbound civilian, state, and military aircraft, especially medical transporters will have sufficient communication equipment to establish and maintain communication with the VCU Communication Room and Virginia Emergency Operations Center (EOC).
 - b. All aircraft involved in patient movement to VCUHS will contact VCUHS Communication Room and EOC to provide available information upon outbound departure as well as upon departure from the scene and again within 15 minutes of arrival with patient status update.
 - c. All aircraft with plans to utilize either the primary or secondary helipads will communicate with VCUHS Communication Room to provide appropriate information as well as to receive any advisories related to either helipad.
 - d. If there is no radio response from the VCUHS Communications Room, EOC (Med 9) or LifeCom will assist with notification.
 - e. All communications for imminent landing at the Primary Helipad will be handled on the Med 9 frequency. The Virginia Commonwealth University Medical Center (VCUHS) Response Team, identified as "VCU Penthouse", will be monitoring only this frequency to provide clearance to land.

- E. Helicopter Personnel
The pilot will be immediately available to relocate the aircraft after off-loading if needed.

- F. Operational Considerations
 - 1. Re-direction of inbound aircraft
 - a. VCUHS will not divert helicopters en-route to a VCUHS facility unless one of the following circumstances exists:
 - i. Declared Internal Disaster that impacts the ability of VCUHS to safely receive patients
 - ii. Security declares that both helipads are not functional.
 - iii. At any time the pilot communicates a safety concern requiring the need to divert the aircraft
 - b. The only staff authorized to communicate the need to divert air traffic are Security, Nursing Director on call and Clinical Administrator after normal business hours or the Pilot.
 - 2. Landing at VCUHS helipads requires clearance from designated VCUHS personnel stating the helipad is safe and clear for landing. For primary helipad this will be accomplished by security walking the helipad prior to clearance.
 - 3. Helipad Operational Status -
 - a. The decision to close or open the Primary Helipad will be determined by the VCUHS Office of Safety and Security and/or Security Officer that is on the roof.
 - b. In preparation for an approaching helicopter to the primary helipad, VCUHS Safety and Security Office will make the decision regarding the safety of the helipad after making a walking inspection of the helipad.
 - c. On approach to the helipad, the pilot can make the decision that the helipad is not safe for landing, in which case, he/she will divert to the secondary helipad.
 - d. Under no circumstance will the aircraft land on or depart from the pad unless cleared to do so by an authorized person who is posted in the Penthouse.
 - 4. Landing Sequence -
 - a. Landing order of multiple inbound helicopters will be determined by order of arrival. In cases where multiple aircraft have similar arrival times, acuity of patients will determine the order of landing.
 - b. The pilots of helicopters along with medical crew on board should determine the highest acuity aircraft and allow them first landing and relay this information to the communications staff.
 - c. The ED Communications Room staff will make the final decision on landing order if flight crews are unable to determine.
 - d. Open radio communication between inbound aircraft crews to facilitate safe operations is needed.
 - 5. Personnel Safety
 - a. Personnel protection supplies and devices will be maintained within the Penthouse and used on every patient debarkation from the helicopter.
 - b. The helicopter crew will direct movement of support personnel to and around the aircraft.
 - c. All personnel will be off the rooftop and behind the secured entrance door during landing and take off.

6. Ancillary support for landing at Secondary Helipad (I Lot)-
 - a. Coordination for ground transportation (Richmond Ambulance Authority) operations at the Secondary Helipad may be conducted through Virginia EOC or LifeCom. ED Communications Room will notify VCU Police to serve as fire watch. It is requested that as much notification time as possible be given to coordinate these efforts.

- G. Outbound Communication:
 1. The ED Communications Room receives notification of Outbound Flight.
 2. The ED Communications Room staff will initiate documentation on the Helicopter Worksheet for each Outbound Flight notification received. (This form is for use by ED Communications Room personnel only).
 3. Notification is then provided to the Clinical Coordinator, VCUHS Safety and Security, and Telepage as delineated on the Helipad Worksheet.
 4. A Security Officer is dispatched to perform a safety inspection of the Primary Helipad and elevator. The officer will notify the ED Communications Room if the Primary Helipad is safe for landing.
 5. If the Primary Helipad or elevator is not safe for landing, the officer will notify the ED Communications Room for potential diversion of the aircraft to the Secondary (I-lot) Helipad.
 6. The Service Response Center (SRC) will be contacted immediately by security to report the problem found.
 7. The officer will then take the appropriate actions to return the Primary Helipad and/or elevator safely into operation.

- H. Inbound Communication:
 1. The ED Communications Room receives notification of Inbound Flight and estimated time of arrival.
 2. The ED Communications Room personnel will immediately contact the Clinical Coordinator, Security Dispatch, and Telepage of Inbound Flight.
 3. The Security Officer will proceed to the Penthouse elevator, secure the Penthouse elevator, and await any needed remaining Response Team.
 4. If the helipad and/or elevator had been deemed out of service after outbound notification, Security Personnel will make a check of the current status. If the problem has been cleared, the ED Communication Room will be notified and the team escorted to the roof. If the problem persists, the ED Communication Room will be notified and instructed to divert the helicopter to the Secondary Helipad.
 5. If at any time the Primary Helipad or elevator issue is corrected prior to the arrival of the helicopter at the Secondary Helipad, it is preferred that the helicopter be allowed to land on the Primary Helipad, provided all policy procedures can be accomplished in a safe and efficient manner.
 6. The Security Officer will report to the Penthouse alone unless other staff has been requested by the incoming aircraft (All Hot off loads must have a Paramedic/Nurse) Once in the Penthouse, the Security Officer will secure the elevator both with the key and with a physical obstruction to the door.
 7. The Security Officer will make a final safety check of the Primary Helipad and will notify the ED communications room that the helipad is "ready for landing" and they are awaiting the arrival.
 8. If the helipad or elevator is deemed not safe for landing, the Response Team will notify the Inbound Flight helicopter or ED Communications Room to divert the aircraft to the Secondary (I-lot) Helipad.
 9. The officer will then take the appropriate actions to return the Primary Helipad and/or elevator safely into operation.

- I. Landing and Approach Procedures:
 - 1. The pilot will have the final decision regarding the safety of landing at the primary helipad.
 - 2. The pilot will control the helipad lighting by utilizing radio frequency 123.025. 5 clicks will turn on/off the pad flood light.
 - 3. The Security Officer and members of response team will remain at the fire suppression and video monitor system of the Penthouse and will monitor the helipad until the aircraft has safely landed. No Personnel should be standing at the entryway from the helipad during landing. The response team will also have available a hand held radio for continuous contact with all traffic.
 - 4. The Response Team will be notified of the unloading procedure (Cold vs. Hot Off-Load) either by direct communications with the helicopter or from the ED Communications Room.
 - 5. The team will then proceed under the direction of the flight crew, if requested, to assist with the unloading of the patient. See Section IV B for details of who is permitted to approach the helicopter.
 - 6. Any person approaching a running helicopter will at a minimum be wearing ear and eye protection.
 - 7. No one will approach the helicopter without having been acknowledged and motioned to do so by a member of the flight crew.
 - 8. The operations of helicopter doors are the sole responsibility of the flight crew.
 - 9. At no time will anyone be permitted near the tail rotor of the aircraft, generally avoid the rear of the aircraft.

- J. Take-off of Helicopter:
 - 1. Returning the helicopter crew to their aircraft will be a priority for the Safety and Security Department to allow the helicopter to return to service as quickly as possible.
 - 2. Security will escort helicopter crew to the helipad in the Penthouse elevator. If the Penthouse elevator is not functional, the crew will be escorted to the eleventh floor in another elevator and will walk up the stairs to the Penthouse.
 - 3. The Security Officer or member of response team will remain at the fire suppression and video monitor system of the Penthouse and will monitor the helipad until the aircraft has left the roof. No Personnel is to stand at the entryway from the helipad during take off.
 - 4. Security will notify the radio room once the helipad is clear and available for next aircraft.

- K. Procedure for Scheduled Maintenance of Helipad, Penthouse elevator, Rooftop, or Adjacent Structures.
 - 1. Closure of the Primary Helipad for routine maintenance will occur in accordance to maintenance policy and with prior notification to the Safety Director.
 - 2. Documentation of periodic maintenance checks will be maintained in the Safety Office with a summary maintained in the *Helo-Ops Compliance Folder*.
 - 3. All efforts will be made to reduce the amount of time the Primary Helipad is out of operation.
 - 4. The Director of Safety will notify, LifeCom, ED Administration, the Clinical Administrators, EOC, VCUHS Service Response Center, VCUHS Security, VCU PD dispatch and all community helicopter operations of all scheduled helipad closures and openings.
 - 5. If the helipad and/or elevator has been deemed out of service the ED Communication Room will be notified and instructed to divert the helicopter to the Secondary Helipad with transportation to the hospital by Richmond Ambulance.
 - 6. If at any time the Primary Helipad or elevator issue is corrected prior to the arrival of the helicopter at the Secondary Helipad, it is preferred that the helicopter be allowed to land on the Primary Helipad, provided all policy procedures can be accomplished in a safe and efficient manner.

- L. Procedure for Un-scheduled Maintenance of Helipad, Penthouse Elevator and Rooftop
 - 1. Elevator failure will not exclude the use of the helipad for the transfer of personnel and/or equipment.
 - 2. All efforts will be made to reduce the amount of time the Primary Helipad is out of operation.
 - 3. Repair of the Penthouse elevator will be considered priority one to include a 24/7 service contract with response to the hospital within one hour.
 - 4. The Service Response Center (SRC) is responsible for notifying hospital security and the ED Communications Room when unexpected downtimes occur. The ED Communications Room will notify LifeCom, EOC and PHI Air Medical (Aircare and Skystat) of loss of helipad operation. VCUHS Safety and Security will notify VCU PD. Additionally, the communication room will notify all inbound aircraft by radio.
 - 5. If the helipad and/or elevator has been deemed out of service the ED Communication Room will be notified and instructed to divert the helicopter to the Secondary Helipad with transportation to the hospital by Richmond Ambulance.
 - 6. If at any time the Primary Helipad or elevator issue is corrected prior to the arrival of the helicopter at the Secondary Helipad, it is preferred that the helicopter be allowed to land on the Primary Helipad, provided all policy procedures can be accomplished in a safe and efficient manner.
 - 7. The SRC will notify VCUHS Safety and Security and the Communication Room when the Primary Helipad returns to normal operation. The ED Communications Room will notify LifeCom, EOC and PHI Air Medical (Aircare and Skystat) of return of helipad operation. VCUHS Safety and Security will notify VCU PD. Additionally, the communication room will notify all inbound aircraft by radio.
 - 8. Should the Main Hospital building be utilizing auxiliary power, Primary Helipad operations will continue once VCUHS Safety and Security personnel have determined that the Penthouse elevator is functional.

V. **REFERENCES:**

- A. State Law
Code of Virginia 5.1
- B. Policies and Procedures:
VCUHS Policy 2152.00 Training and Competency
VCUHS Safety Manual
- C. Other
Helipad Policy, Vanderbilt University Medical Center
Holleran, R: Safety and Survival; *Air & Surface Patient Transport*, St. Louis, 2003, Mosby
Commission on Accreditation of Medical Transport Systems: *Accreditation Standards*, ed 6, Anderson, SC, 2004, Author.

VI. **RESOURCES:**

Emergency Department Clinical Coordinator 628-0091
Department of Safety and Security 828-6595
Emergency Management 628-4595

VII. **REVIEW REQUIREMENTS:**

Department of Safety and Security
Emergency Department Nursing Administration
Risk Management
Director of Patient Care Support
Medical Director, VCUHS LifeEvac

APPROVED:

DATE:

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