

STATE OF HAWAII
MAUI COUNTY
EMERGENCY HELICOPTER AIR AMBULANCE
IMPLEMENTATION GUIDE



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Background and Introduction

The Emergency Medical Services and Injury Prevention System Branch (EMSIPSB) of the Hawaii State Department of Health (DOH), pursuant to §§321-222 to 321-224 of the Hawaii Revised Statutes, oversees and manages the State emergency medical services (EMS) system, which includes pre-hospital ambulance emergency responses to 911 calls. The comprehensive EMS system for patient care in Hawaii includes the DOH, EMSIPSB, county police, fire services, water safety emergency responders, public and private emergency ambulance services, emergency department and hospital staff, and the public.

Maui County is comprised of four primary islands separated by ocean: Maui, Moloka'i, Lana'i, and Kaho'olawe. The EMS capacity in Maui County faces significant challenges due to the remote geographical locations of some emergency scenes, requiring long ground transport times, and water barriers between islands. The islands of Moloka'i, Lana'i, and Kaho'olawe have limited healthcare services for severely ill or injured patients, with certain specialty services available only on O'ahu. These factors collectively hinder timely access to critical services, impacting patient outcomes.

Maui County's 911 system includes police, fire, and state-contracted ground ambulance services, supplemented by private services. A private company provides the only fixed-wing aeromedical service for inter-island transport, and another provides ground ambulance for the county of Maui. Maui Memorial Medical Center (MMMC) is the primary facility in the county, with a fully staffed emergency department capable of caring for critical patients.

Established under Act 2, 2003, Hawaii Session Laws, the DOH implemented a rotary-wing ambulance service to improve emergency medical response. The Maui County Emergency Helicopter Air Ambulance (Maui Rotor) is intended to provide an additional EMS service to address Maui County's unique challenges of providing timely medical care. Following national guidelines, the Maui Rotor aims to provide rapid transport for critically ill or injured patients, ensuring they reach the appropriate facilities for definitive care swiftly and safely.

The Maui Rotor complements the 911 ground ambulances, serving primarily as a 911 resource. It responds to emergencies dispatched through the state's designated 911 center. While it does not replace existing inter-facility fixed-wing air ambulance services, it may be used for inter-facility transport when commercial aeromedical services are unavailable, and transportation to a higher level of care within two hours is medically necessary. This includes situations involving critically ill patients, trauma, or threats to limbs or eyesight. These calls are coordinated through the state's designated 911 dispatch center, with transport approval granted by a State EMS District Medical Director or their designee.

All emergency services, including ground, rotary, and fixed-wing ambulances, must collaborate to provide professional and cost-effective out-of-hospital care. By efficiently utilizing resources, these services aim to enhance patient outcomes for the entire population at risk. The Maui Rotor service is intended to strengthen the overall EMS system that serves the people of Maui County.

Mission Safety

The Maui Rotor Program will operate in accordance with national standards set forth by the Commission on Accreditation of Medical Transport Systems (CAMTS). These standards are designed to ensure the safety and quality of patient care during air medical transport.

Staffing

The Maui Rotor Program must be minimally staffed with four (4) full-time, permanently assigned pilots (for one-pilot operations), four (4) full-time flight nurses, four (4) full-time flight paramedics, and two (2) certified aircraft maintenance mechanics. The leadership/supervisory personnel must minimally consist of a Program Director, Pilot in Command, Chief Flight Nurse, Program Administrator, and Program Medical Director.

The clinical flight team for each mission must include at least one (1) flight nurse and one (1) flight paramedic.

All personnel who participate in Maui Rotor missions must have the following minimum qualifications:

Flight Paramedics

- State paramedic license
- Minimum 3 years experience in a 911 system
- ACLS, BLS, PALS, NRP, Advanced Trauma Certificate
- Advanced Transport Certificate/Flight Paramedic Certification (FP-C) within twelve (12) months of contract start date, or twelve (12) months after hire if hired after the contract start date. In the event the employee is unable to obtain this certification in 12 months, a maximum of one (1) six (6) month extension, for a total of eighteen (18) months, may be granted by the Provider only when done in conjunction with a written performance improvement plan.

Flight Registered Nurses

- State RN License
- Minimum 3 years critical care experience working full time in an ER or ICU
- ACLS, BLS, PALS, NRP, Advanced Trauma Certificate
- Advanced Transport Certificate/Certified Flight Registered Nurse (CFRN) within twelve (12) months of contract start date, or twelve (12) months after hire if hired after the contract start date. In the event the employee is unable to obtain this certification in 12 months, a maximum of one (1) six (6) month extension, for a total of eighteen (18) months, may be granted by the Provider only when done in conjunction with a written performance improvement plan.

Pilots

- Current Rotorcraft FAA Commercial Certification Helicopter instrument rating
- Current FAA Class II Medical Certificate

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- 2,000 helicopter flight hours
 - 1,000 helicopter PIC hours
 - 1,000 turbine hours
- Minimum 200 helicopter night flight hours (aided and/or unaided)

Aircraft Maintenance Technicians

- 3 years FAA Airframe and Powerplant (A&P) Certificated experience
- 3 years turbine powered helicopter experience
- Federal Aviation Regulations knowledge
- Aircraft Maintenance systems, records and maintenance support and planning

Training Programs

Primary to mission safety for the Maui Rotor program are the knowledge, skills, and attitude of personnel and adequate preparation. The Federal Aviation Agency (FAA) strictly regulates safety standards for the helicopter, maintenance, and pilots.

An Aircraft Maintenance Technician Training Program will provide ongoing training of maintenance personnel to ensure proficiency in their duties. Initial and recurrent training must be provided and documented in each employee's record. Records of previous training and experience as well as copies of certificates issued for training must be maintained in each employee's training file.

A Pilot Training Program will ensure ongoing training of pilots to maintain proficiency in their duties. Annual recurrent pilot training ensures each crew member is adequately trained and currently proficient in the assigned crew position in their assigned aircraft. Pilots must complete a minimum of twelve (12) hours of recurrent training annually. Initial and recurrent training must be provided and documented in each employee's record.

A training program for the clinical team will ensure the maintenance of all training records for flight nurses and flight paramedics. Current licensure and fulfillment of continuing education requirements for recertification must be maintained in each employee's training file.

Safety Officer

There shall be one (1) designated Safety Officer who will be responsible to keep records of training of personnel and assure that they have completed training prior to flying Maui Rotor missions. The Safety Officer will review compliance with safety measures and work with other agencies in systems improvements. The Safety Officer will also work with the Medical Director to add specific components related to the Maui Rotor to their existing Quality Improvement Plan and submit such plan to the EMSIPSB for review.

Primary Responsibility for Mission Safety

The following points summarize the procedures to be followed:

- The pilot has the primary responsibility for the overall safety of the helicopter and its occupants. He/she also has the authority to refuse or cancel any mission deemed unsafe for any reason.
- The safety of the Maui Rotor staff, the patient, emergency workers, and bystanders shall always be given the highest priority during every mission. It is understood that all agencies with personnel involved in Maui Rotor landings and takeoffs shall have had basic helicopter safety training.

General Safety Guidelines

The following points summarize general safety procedures for the Maui Rotor:

- Personnel assigned to helicopter operations are responsible for the enforcement of and compliance with all safety regulations.
- Pilots and flight crew personnel shall advise all personnel of the safety requirements near helicopters on the ground and when flights are made.
- Principles of Crew Resource Management (CRM) shall be utilized. During all critical phases of flight, or at the pilot's request, any member of the crew can be utilized to assist the pilot, e.g. observe for obstructions.
- Helmets and other safety equipment provided to the flight crew shall be worn at all times while engaged on a mission.
- Patients with critical injuries who have possible contamination with chemical or biological agents should be thoroughly cleaned and disinfected before loading into the helicopter.
- All primary flight crews and all equipment shall be weighed so that the pilot can determine the total "gross weight" of the helicopter.
- Cargo will be secured within the helicopter.
- The pilot's approval will be obtained first before any gear is stowed in or on the helicopter.

Ground Safety

The following points summarize procedures for ground safety:

- All personnel operating on and around the Landing Zone will wear protective gear.
- All Landing Zones shall be kept clear of spectators when helicopter operations are in progress. A clear landing zone a minimum of 100 feet in diameter is required.
- Patient(s) shall remain in the ambulance until the helicopter is ready for them to be loaded. In the case of Emergency Landing Zones, any patient(s) shall wait at least 100 feet from the helicopter touch down point.
- All night flights will utilize only safe and pre-designated, "night safe", Emergency

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Landing Zones.

- Nearby obstructions to helicopter approaches to a Landing Zone should be well-marked or lighted.
- Wind direction shall always be indicated by either flagging, streamers, “popping smoke”, throwing dirt, or holding hands up with backs to the wind.
- All personnel will always remain clear of the helicopter by at least 50 feet, unless specific assignments dictate otherwise. There will be no smoking within 50 feet of the helicopter or within 100 feet of any refueling equipment. "No Smoking" signs will be posted at all refueling areas and designated secure landing zones.
- Personnel working on or near the Maui Rotor will always wear suitable eye protection (goggles) to guard against possible injury to the eyes by debris in the rotor wash.
- Personnel working at heliports and landing zones will wear suitable ear protection.
- All personnel are to always keep clear of all helicopter rotors. Unless required to be closer, personnel shall remain 50 feet away from the helicopter.
- Always approach the helicopter from the side and near the front in full view of the pilot.
- If a helicopter is left unattended, stay clear of it.
- Always approach and depart from the helicopter at a slight crouch and always keep in sight of the pilot.
- Never approach the helicopter from any side where the ground is higher than the ground on which the helicopter is standing or hovering.
- Keep all long-handled tools clear of the main rotor's path or stabilizer bar.
- Crew equipment, tools, lunches, papers, refuse, etc. will not be stored on the landing area by personnel when working in the immediate vicinity of a heliport or landing zone.
- Do not face helicopters when they are landing, taking off, or hovering unless goggles are worn.
- Loose clothing, hats, blankets, stethoscopes and any other loose object could be sucked into the rotors and must be removed before personnel are allowed within four (4) rotor spans of the helicopter.
- As in all matters of safety, the pilot shall have final authority for all landings.

Landing Zone Safety

The Maui Fire Department (MFD) shall provide and ensure non-airport Landing Zone safety for scene landing subject to availability of Fire Department resources and personnel. If the MFD is not available, then the Maui Police Department (MPD) shall supply an officer to ensure Landing Zone safety. The MPD and/or MFD shall also supply units, subject to resource availability, to provide for crowd control; and to respond to any emergencies that may develop.

National Park personnel shall be on standby at Landing Zones in National Parks to provide safety, crowd control, and to respond to any emergency situations that may develop.

Patient Loading Procedures

The following points summarize procedures for patient loading onto the Maui Rotor:

- Patients(s) shall remain in the ambulance until the helicopter is ready for them to be loaded. In the case of Emergency Landing Zones, any patient(s) shall wait at least 100 feet from the helicopter touch down point.
- The Maui Rotor is limited to a maximum of two (2) patients per flight, but depending on weight, patient size, acuity, and availability of accompanying medical personnel, the Maui Rotor may only be able to take one (1) patient.
- Patients will be prepared for transport prior to helicopter arrival. The Maui Rotor air crew will be in charge of loading priorities and procedures.
- Loose clothing, hats, blankets, stethoscopes, and any other loose objects that could be sucked into the rotors must be removed before personnel are allowed within four (4) rotor spans of the helicopter. This should be done while awaiting the arrival of the Maui Rotor.
- Patients shall be loaded one at a time, and only one patient at a time will be permitted within the rotor span of the helicopter to ensure safety.
- Assistance may be required from on-site personnel. On-site personnel will ensure all items that accompany the patient are secured and given to the Maui Rotor flight crew.
- Patients who have possible contamination with chemical or biological agents should be thoroughly cleaned and disinfected before entering the helicopter. In such cases, transport by ground ambulance, if at all feasible, should be given strong consideration.

In-Flight Safety

The following points summarize in-flight safety procedures:

- Safety belts and shoulder harnesses will be fastened by all occupants and adjusted before taking off, and only removed when instructed by the pilot or upon landing.
- Eye protection and ear protection is to be worn at all times during Maui Rotor missions except when removed for patient assessment.
- All equipment will be properly secured.
- Doors will be properly secured.
- Ground crews and medical teams will alert the Maui Rotor staff about any uncooperative patient behavior that may potentially put the safety of the mission at risk. For this reason, patients with behavioral emergencies (whether or not drug-related) will generally NOT be transported by the Maui Rotor.
- If a patient is temporarily uncooperative but has life-threatening emergencies that would benefit from Maui Rotor transport, chemical and/or hard restraints may be used following consultation with the Maui Rotor Medical Director.
- The flight crew can refuse to transport any patient who they feel might reasonably be considered to pose a threat to the safety of the mission.

Minimum Flight Conditions

The following points summarize the minimum flight conditions for Maui Rotor operation: The Provider will conduct all flight operations in strict accordance with the weather minimums specified in its FAA-approved General Operations Manual (GOM). The Provider shall ensure full compliance with these approved weather minimums and all applicable Federal Aviation Regulations at all times.

Single Abort Policy

It is the policy of the State of Hawaii that a flight can be aborted at any stage, even before lift-off, by any member of the flight team, for reasons of safety. Therefore, all transferring agencies must be prepared to take back any patient and make other transportation arrangements from aborted missions.

If a mission is aborted, an incident report shall be written as to why the mission was aborted, with a copy sent to the State EMSIPSB and to the contract provider's Safety and Risk Manager within 24 hours. A copy of these reports is to be kept for 5 years. A patient ePCR must be completed for all aborted missions.

Medical Oversight

Offline Medical Control

Licensing laws governing scope of practice of the flight crew require they perform patient care under the direction of a licensed physician. Offline medical control refers to the rules that govern patient care by the flight crew. Offline medical control of patient care at the scene and during transport by helicopter will be provided in keeping with the contracted provider's protocols for the flight crew.

The Maui Rotor Program Medical Director shall perform case reviews on transfer requests and completed transports and all cases are subject to review by the State EMS Medical Directors. Cases that present opportunities for system improvement will be utilized for quality enhancement.

Policies and procedures related to pre-hospital patient care or use of the Maui Rotor service shall be subject to review by the State EMS Medical Director. The State EMS Medical Director or designee shall have the ultimate authority to limit use of Maui Rotor for inter-facility transfers.

Online Medical Control

Online Medical Control refers to the provision of real-time medical direction at the scene

and during transport to a medical facility. This involves direct communication between emergency medical personnel and a medical director or designated physician via communication devices. Online Medical Control shall be provided by the contracted provider's Medical Director who shall be available 24/7.

Informational communication shall be made to the receiving facility.

Criteria for Use of Maui Rotor

Basic Triage Criteria

Use of the Maui Rotor is primarily intended to reduce transport time to definitive care for selected critically ill or injured patients. Helicopter ambulance transport has some disadvantages over ground and fixed-wing transport. Medical assessment and intervention in the helicopter are comparatively limited due to noise, motion, space limitations, security needs, vibration, and altitude changes. Additionally, the risk for injury during missions is greater. These factors must be weighed against the shorter transport time when determining the advisability of Maui Rotor transport. In each case, regardless of the severity of the patient's illness or injury, the time benefit of a Maui Rotor transport over ground ambulance must be deemed to be of sufficient importance to a patient's outcome to warrant its use.

Several national organizations have issued guidelines and standards for use of emergency helicopters, and Act 2 instructs that the Maui Rotor system be based on these guidelines. It must be kept in mind that triage is affected by multiple factors that include not only the patient's condition but also other attributes of the system. Each EMS system has unique factors that must be used to form triage criteria. The contract provider will ensure these criteria will be part of training for all Maui EMS personnel.

The recommended criteria are that Maui Rotor transport should be strongly considered when a patient's condition is:

- 1) deemed by an on-scene paramedic, EMT, Fire Captain, or Police Sergeant to require rapid transportation to prevent the loss of life, limb, or vital tissue, AND
- 2) deemed that under the existing conditions, the Maui Rotor would save 30 minutes or more over a ground ambulance transport.

Because of the difficulty of performing procedures in flight, all patients being transported by the Maui Rotor should have a patent airway and I.V. access, but transport of critically injured patients should not be delayed if, in the opinion of the treating MICT, the benefits of rapid transport outweigh the risk of further delay.

When the Maui Rotor Should Not be Used

The following points summarize conditions under which the Maui Rotor would generally not be used:

- When ground ambulance transport can get the patient to the appropriate hospital in 30 minutes or less.
- For respiratory problems exacerbated by increasing altitude including, but not limited to, closed pneumothorax.
- For patients exhibiting behavioral disorders or under the influence of mind-altering drugs, whose behavior cannot be adequately controlled.
- For victims of altitude sickness or barotrauma, except for spinal cord decompression sickness that requires a recompression chamber.
- For pregnant patients in uncomplicated labor.
- As a search and rescue helicopter. The Maui Rotor may retrieve victims already identified by search and rescue teams in remote areas if there is a safe emergency landing zone and the patient otherwise qualifies for the Maui Rotor.
- To transport patients who are clinically dead, where CPR is still in progress, or for "NO CODE" and hospice patients (patients with advanced directives requesting no CPR or no extraordinary measures).
- To pick up patients in the water or on boats.

Special Circumstances

The Maui Rotor may be used on a case-by-case basis in special patient circumstances outside of these guidelines upon consultation between the treating paramedic and the Base Station Physician at MMMC.

When there is an urgent need for the emergency transfer of limited and essential resources, e.g. medical equipment and personnel to facilities with limited resources in times of disasters or inaccessible ground routes, use of the Maui Rotor may be appropriate. Non-patient transports must be approved by a State EMS Medical Director.

Description of the Maui Rotor Service

Helicopters

The primary aircraft will be a medically configured, twin-engine Airbus H145 or equivalent. The aircraft must be IFR equipped, have clamshell doors, and have capability to fly across the ocean, at night, and to transport all patient populations, including but not limited to the morbidly obese, neonatal patients, and high-risk obstetric patients.

A back-up aircraft will be provided in times when the primary aircraft is out of service to assure maximum in-service rates. Either the primary or back-up aircraft must be available at

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all times. The back-up aircraft will be a medically configured, twin-engine Airbus H135 or equivalent with overwater and night vision device capabilities. Both the primary and back-up helicopters must be stationed in the county of Maui.

Equipment and Medications

The Maui Rotor will have all equipment and medications required on ground ambulances by Title 11, Chapter 72 EMS Administrative Rules. It will also carry sufficient oxygen for patient missions, including a factor for unanticipated delays.

Landing Zone Guidelines

The Maui Fire Department shall provide and ensure Landing Zone safety for scene landing subject to availability of Fire Department resources. If the Maui Fire Department is not available, then the Maui Police Department shall supply an officer to ensure Landing Zone safety.

The contracted provider shall provide EMSIPSB with a list of suitable landing zones at the start of the contract period, and subsequently on an annual basis and whenever updates occur.

Minimum Crew

Minimum crew will minimally consist of one (1) pilot, one (1) flight nurse, and one (1) flight paramedic. An additional pilot shall fly, as needed depending on mission type, time provided the Provider has been given a minimum of 36 hours notice for such need. If a specialty nurse or other health professional is required for special equipment or medications on a given mission, that individual shall be considered part of the minimum crew and may replace the flight nurse or flight paramedic on the medical crew.

Operational Hours/Conditions

The Maui Rotor service is intended to be available 24 hours daily, 7 days per week. Subject to the pilot's final approval, the availability of the service will only be limited by weather, visibility, mechanical readiness of the helicopter, and the presence of appropriate crew and medical personnel. The safety of the crew, patients, and ground crew will be the top priority in accepting, declining, or aborting a mission.

Target Response Times

Response time is measured from the time the call is received by the pilot to the time the aircraft lifts off. Response time should not exceed twenty minutes. Pilots are expected to be on site with the aircraft and prepared to immediately respond to a request for service.

Procedure for Using the Maui Rotor

Activation/Request

Activation or request for Maui Rotor service will generally occur after an on-scene paramedic determines that the patient's condition warrants use of the fastest medical transport modality available to prevent loss of life, limb, or vital tissue and the ground ambulance transport time will exceed 30 minutes to the hospital. The paramedic shall call Maui Central Dispatch via MEDICOM to request the Maui Rotor and any needed support from Police and/or Fire Departments. If MEDICOM does not work, a cellular (or other) phone may be used.

In addition to a paramedic, a Maui County Police Command Officer (Sergeant and above) or a Maui County Fire Department Command Officer (Captain or above) or a National Park Service EMT at the scene may also call for the Maui Rotor if, in their opinion, the above critical condition and time criteria exist **and** the ETA of the en route ground ambulance is more than ten (10) minutes.

Necessary Call Information

In each case, the person calling out the Maui Rotor shall inform Maui Central Dispatch of:

- 1) Name of person/ambulance unit requesting the Maui Rotor.
- 2) The number of patients to be transported (maximum is two).
- 3) The nature of the illness or injury.
- 4) Reason the Maui Rotor is indicated.
- 5) Any special equipment needed for the transport.
- 6) Location of the scene.
- 7) Proposed destination of the patient(s).
- 8) Location of pick-up site with GPS coordinates (if available) and/or the nearest pre-designated Emergency Landing Zone.
- 9) Weather conditions and visual markings at the pick-up site.

Dispatch and Communications

All dispatching of the Maui Rotor within the 911 EMS system will be managed by the state-designation dispatch center, currently Maui Police Department (MPD) 911 communications/dispatch center, also known as Maui Central Dispatch. Dispatch will

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maintain continuous radio communication with the Maui Rotor through the MEDICOM radio system. The 800 MHz radio system may be utilized as a back-up communication system. When the Maui Rotor is on the ground on O'ahu, and whenever MEDICOM is unavailable, cellular (or other) phone communications may also be utilized.

Dispatch shall notify the Provider's dispatch with the scene information from the original paramedic call. Dispatch shall also notify the appropriate MPD personnel and MFD about Maui Rotor missions.

The following points summarize Dispatch procedures upon receipt of a Maui Rotor transport request:

- 1) Obtain the necessary call information.
- 2) Notify helicopter pilot/medical crew.
- 3) Obtain from pilot the ETA for the helicopter at the Landing Zones.
- 4) Notify MFD, and/or MPD units so that they can prepare the Landing Zones.
- 5) Notify the Maui Rotor flight crew and ground ambulance crew of ETA at the Landing Zone.
- 6) Dispatch additional ambulance units as needed.
- 7) Assist in relaying pertinent communications between responding units.
- 8) Dispatch appropriate MFD Company to MMMC Landing Zone when necessary.

Flight Crew

Prior to launching each mission, the Maui Rotor pilot shall evaluate weather conditions and helicopter air-worthiness to determine whether or not the mission can be safely undertaken. This determination is to be done without knowledge of the number of patients, types, or ages of the injured or ill. The Maui Rotor pilot shall launch a mission only he/she deems it safe to do so and shall abort a mission whenever he/she deems overall conditions to have become unsafe.

The Maui Rotor flight crew shall call in the following times to Maui Central Dispatch:

- Responding to call (pilot and medical crew)
- Lift off (pilot and medical crew)
- En route to patient pick up
- Touchdown at patient pick-up Landing Zone
- Lift off with patient and every 15 minutes during flight
- Touch down at Medical Facility
- Back in service, lift off, and every 15 minutes during flight
- Back in service on the ground
- Back in service at the helipad

Medical Crew

Patient care, prioritization, and destination decisions shall be managed by the flight nurse in charge of the case, in accordance with the contracted provider's protocols and in consultation with the contracted provider's air medical director.

As soon as the outbound Maui Rotor is airborne with the medical crew, the flight nurse shall give a scene ETA to 911 Dispatch and re-confirm information regarding the appropriate landing zone (scene or pre-designated).

Following the initial communication with Maui Central Dispatch, the flight nurse will inform Maui Memorial Medical Center of the mission that is underway and give an ETA to the hospital.

After the Maui Rotor has departed the scene with the patient, the flight nurse shall communicate the incoming patient's condition and the ETA to the receiving hospital's Base Station Physician.

A cellular (or other) phone communication may be preferable to a MEDICOM communication so that the MEDICOM remains open to the Maui Rotor crew to communicate with the Base Station. If the appropriate destination for the patient is uncertain, the flight nurse shall consult with the Base Station Physician at MMMC prior to the patient leaving the scene.

Multiple Calls

When there is more than one call for the Maui Rotor during the same time, the MMMC Base Station Physician, in consultation with the paramedics at the scenes, shall determine which patient they should respond to first, and how to transport the remaining patients.

Canceling a Call

When a first responder activates the Maui Rotor, the first paramedic on the scene will conduct a comprehensive assessment. If the patient does not meet Maui Rotor criteria, the paramedic may cancel a request by contacting Dispatch to inform the Maui Rotor flight and medical crews of the cancellation. A patient ePCR must be created for all canceled calls.

Inter-facility Transfers

General Guidelines

Requests for the use of the Maui Rotor for emergency inter-facility transfers must adhere to the guidelines set forth by the Commission on Accreditation of Medical Transport Systems (CAMTS). Factors related to the overall efficient use of EMS resources within Maui County and the State are also taken into consideration.

Each inter-facility transfer must be conducted with the understanding that the time to definitive treatment is crucial for patient outcomes. Therefore, the use of the Maui Rotor helicopter is warranted only when this time-sensitive factor is met. During inter-facility transfers, the helicopter will be unavailable for 911 emergency calls until the transfer is complete. Only emergency transfers for patients with time-sensitive medical conditions will be conducted; no pre-scheduled inter-facility transfers will be allowed.

Transfer Requests

To activate the Maui Rotor for inter-facility transfers, the treating physician must confirm that the patient meets the eligibility criteria for aeromedical transport prior to contacting a State EMS District Medical Director or designee, through Physician's Exchange. To assure the medical necessity of the Maui Rotor transfer request, the transferring physician shall complete and sign the Maui Rotor Transfer Certification of Need Form prior to the patient leaving the facility (Appendix B). The form will record which of the following criteria were met to determine eligibility for transport.

Eligibility criteria may include the following:

- 1) Transportation to a higher level of care is medically necessary, including, but not limited to, critically ill, trauma, limb or eyesight threatening conditions.
- 2) Urgent surgery or a definitive procedure is scheduled upon arrival at a receiving facility on another island that, in the opinion of the treating physician, is necessary to prevent loss of life, limb, or vital tissue.

If the treating physician determines the patient meets the eligibility criteria for inter-facility transport via the Maui Rotor, they will contact a State EMS District Medical Director or designee through Physician's Exchange: (808) 524-2575 for approval. The State EMS District Medical Director or their designee will determine the appropriateness of the transfer.

The following information must be relayed:

- 1) Maui county ISLAND and name of SENDING HEALTH CARE FACILITY
- 2) Point of CONTACT at the health care facility
- 3) A DIRECT contact NUMBER to receive a return call from the EMS District Medical Director

Information required by the EMS District Medical Director:

- 1) Patient Information: Name, Age, Height, Weight, Diagnosis, Equipment needs
- 2) Name of Transferring physician/Receiving physician

Instructions for treating physician/health care facility:

- 1) The Maui Rotor will be minimally staffed with one pilot, one flight nurse, and one flight paramedic. The treating physician/health care facility must make the determination that this level of staffing is adequate for the transport and that the patient/responsible party understands and agrees to the transport with this staffing level. This should be discussed with the State EMS District Medical Director or designee on call.
- 2) If the request is approved, the EMS District Medical Director or designee will contact Maui County EMS Dispatch to activate the helicopter.
- 3) The treating physician/health care facility is responsible for arranging ground transportation for the patient from the transporting medical facility to the aircraft and from the aircraft to the receiving medical facility.

Patient Preparation

Thorough coordination and preparation are essential to the success of inter-facility transports. It is always the transferring physician's responsibility to find an accepting physician at the receiving hospital, and to relay all pertinent patient information to him/her. In addition, the patient's medical information, X-Rays, lab results, and transfer papers are to be copied and given to the medical crew prior to the transfer. Specialized equipment or medications needed during transport that are outside the medical crew's scope of practice will not be continued during Maui Rotor transport unless a qualified health care provider is sent to oversee its use.

- Litters and backboards must be compatible with the Maui Rotor.
- No glass bottle IVs will be accepted. Saline locks are an acceptable IV access when fluid administration is not necessary during transport.
- Sufficient drip medications should be pre-mixed and sent with each patient to reach the destination hospital.

Maui Emergency Helicopter Air Ambulance

- A completed Transfer Form (Appendix B) shall accompany each interfacility transfer patient. Copies of all records and forms shall be given to the receiving physician.
- Any additional equipment must be labeled with the transferring agency name.

Communications

Maui Central Dispatch will be in constant radio communication with the Maui Rotor via the MEDICOM radio system. The Maui Rotor medical crew shall continuously monitor the State of Hawaii MEDICOM Radio as well as Maui County's 800 MHz radio system. The contracted provider is responsible for flight following. (When the Maui Rotor is on the ground on O'ahu, or MEDICOM is not working, cellular (or other) phone communications may also be utilized.

Proper communication during emergency transfers must be maintained at all times, beginning with the initial request and during the flight until the final destination is reached.

Quality Assurance

The Program Director shall be responsible for collecting records of all Maui Rotor missions and for monitoring of internal indicators for system performance that are pertinent. These records will be reviewed by the Program Medical Director and will be forwarded to the State EMSIPSB for data entry. Maui County Police Dispatch and the contracted provider will provide records related to time data points for data collection as requested by EMSIPSB. Records and data will be forwarded to the State EMSIPSB within 30 days of the mission.

The State Aeromedical Quality Improvement Committee will receive and review cases forwarded to it by the Maui Rotor Program, or by any system provider or concerned community member. The EMSIPSB will issue periodic reports on the utilization of Maui Rotor.

Appendix A

List of Designated Landing Zones

The contracted provider shall provide EMSIPSB with a list of suitable landing zones at the start of the contract period, and subsequently on an annual basis or whenever updates occur.

Designated Maui County Facility Landing Zones

- Maui Memorial Medical Center Helipad
- Hana – Hana Airport
- Lana'i Community Hospital – Lana'i Airport
- Moloka'i General Hospital - Moloka'i Airport
- Kalaupapa Airport

Designated O'ahu Facility Landing Zones

- Queen's Medical Center
- Honolulu Airport – Bradley Pacific Aviation (located on Lagoon Drive) for all other hospitals on O'ahu without suitable landing zones

As the Maui Rotor service evolves, additional landing zones on O'ahu may be expanded.

Appendix B

Maui Rotor Inter-facility Transfer Certification of Need Form

Legislative Statutes require that the Maui Rotor is utilized in accordance with National standards set by the Association of Air Medical Services, the American College of Surgeons, and the National Association of Emergency Medical Service Physicians. Each inter-facility transfer must be conducted with the understanding that the time to definitive treatment is crucial for patient outcomes. Therefore, the use of the Maui Rotor helicopter is warranted only when this time-sensitive factor is met. During inter-facility transfers, the helicopter will be unavailable for 911 emergency calls until the transfer is complete.

To assure that the inter-facility transfers done by the Maui Rotor are in accord with National Standards,

Check at least one of the following statements that pertains to your patient:

_____ Emergency, life-saving treatment is required at an off-island facility, the receiving facility has agreed to the transfer, and the wait for a fixed-wing air ambulance would, in the opinion of the treating physician, put the patient at risk for loss of life, limb, or vital tissue.

_____ Urgent surgery or a definitive procedure is scheduled upon arrival at a receiving facility on another island that, in the opinion of the treating physician, is necessary to prevent loss of life, limb, or vital tissue, and fixed-wing air ambulance's ETA to pick up the patient is projected to exceed two (2) hours.

Please contact a State EMS Medical Director or designee via Physician's Exchange: (808) 524-2575 for approval of this transport, sign the form, and send it with the patient.

DATE: _____ SENDING FACILITY: _____

PATIENT'S NAME: _____

CERTIFYING MD'S NAME (PRINT): _____

CERTIFYING MD'S SIGNATURE: _____