



**SELECTION CRITERIA FOR PATIENT  
RETRIEVAL & TRANSFER  
BY AIR AMBULANCE**



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## 1. BACKGROUND

Retrieval medicine is the process by which suitably qualified and trained personnel utilize appropriate equipment and transport platforms to clinically manage and safely transport a patient from one location to another. In a country like Maldives which poses geographical limitations to patients for access to quality healthcare, retrieval medicine is crucial. Patient retrievals has been conducted in Maldives via sea ambulance, helicopter & fixed-wing air crafts. Due to the amplified demand for a designated aeromedical patient retrieval service, air ambulance service was initiated & incorporated in to the Maldives Emergency Medical Services (MEMS) on March 2024. Air ambulance service currently handles domestic patient transfers. The launch of the air ambulance services presents opportunities to optimize emergency response & patient care. To ensure effectiveness of this service, clear guidance on patient selection and transportation criteria will help maximizing service availability for emergency evacuations and complex retrievals.

## 2. SCOPE

These criteria will be used by doctors at any referring facility as a guidance to refer patients to higher centers by air ambulance. This guide is currently limited for domestic patient retrievals and is not applicable to primary retrieval services.

## 3. OBJECTIVES

The objective of the guideline is to:

- Provide guidance as a triage tool that aids as a dispatch criteria of air ambulance for healthcare professionals.
- To ensure air ambulance service is utilized in a beneficial and efficient manner for emergency evacuations & urgent retrievals for timely access to efficient high-quality care to improve clinical outcomes to minimize mortality and morbidity.

## 4. TERMINOLOGY

For the purpose of this criteria the following definitions will be used.

### 4.1 Air ambulance

- Referred to the fixed wing air crafts that is currently being used in National Ambulance Service of Maldives.

### 4.2 Healthcare professionals

- Health professionals registered in registered in the Maldives Allied Health Council under the Health Professionals Act 13/2015 or registered in the Maldives Medical Council under the Health Professionals Act 13/2015 or Maldives Nursing and Midwifery Council under Health Professionals Act 13/2015.

### 4.3 Retrieval

- Process by which suitably qualified and trained personnel utilize appropriate equipment and transport platforms to clinically manage and safely transport a patient from one location to another.

### 4.4 Primary retrieval

- Transfer of patients from place of incident to initial health facility.

### 4.5 Secondary retrieval

- Transfer of patients from health center to higher level facility.

### 4.6 Tertiary retrieval

- Transfer of patients from similar level of facility to other.

## 5. TYPES OF PATIENT RETRIEVAL & TRANSFER

### 5.1 EMERGENCY EVACUATION

5.1.1 Defined as cases where **immediate transfer of patient** is required based on the clinical judgement &/or available investigation reports, of the referring doctor & case accepting doctor regarding severity of patient condition with **imminent threat to life or irreversible disability with delayed treatment.**

5.1.2 Prerequisites for a case to be considered for emergency evacuation by air ambulance includes but **NOT limited** to cases where patient's condition exceeds the capabilities of the referring healthcare facility, such as in cases of severe trauma, cardiac emergencies, neurological disorders, or other life-threatening conditions requiring specialized interventions, surgery, or intensive care management:

- Lack of specialists in the referring health facility that can provide required intervention needed for the treatment of imminent life-threatening condition or condition that could lead to irreversible disability.
- Lack of diagnostic facilities (laboratory investigations &/or radiological investigations) that is necessary to diagnose or continue treatment of an imminent life-threatening condition or condition that could lead to irreversible disability in the referring health facility.
- Lack of availability of advised emergency treatment for an imminent life-threatening condition or condition that could lead to irreversible disability in the referring health facility.

5.1.3 Examples of cases to be considered for emergency evacuation includes, **but not limited to:**

- Cardiac cases:
  - i. Acute myocardial infarction cases requiring time sensitive medical intervention such as percutaneous coronary intervention etc.

ii. Aortic dissection

○ Neurological cases:

i. Acute Stroke cases requiring time sensitive medical intervention such as thrombolytic therapy & neurosurgery.

○ Polytrauma cases with life threatening &/or limb threatening injuries.

5.1.4 If a case is considered as an emergency evacuation by the referring doctor and case accepting doctor, air ambulance service should be utilized for patient retrieval.

## 5.2 COMPLEX RETRIEVAL

5.2.1 Defined as cases where transfer of the patient is necessary depending on severity of the condition &/or medical complexity requiring specialized expertise to deliver urgent care, **however there is NO imminent threat to life or irreversible disability.**

5.2.2 The time frame for patient transfer should be discussed and agreed between referring medical officer from the health center or specialist doctor from the hospital and case accepting specialist doctor.

5.2.3 Prerequisites for a case to be considered for complex retrieval by air ambulance includes:

- Lack of specialists, diagnostic facilities & provisions for treatment interventions not available in the referring health facility **for continuity of care.**

5.2.4 Examples of cases to be considered for complex retrieval includes, **but not limited to:**

- Trauma cases where patient is hemodynamically stable & minimal/no active bleeding, requiring surgical intervention.
- Decompensated chronic liver disease case requiring paracentesis.

- 5.2.5 To optimize efficiency of air ambulance service, transfer of complex retrieval cases **maybe pre-planned within the agreed time duration or a scheduled flight can be arranged.**
- 5.2.6 However, in situations where a scheduled flight cannot be secured within the timeframe discussed & agreed by clinicians, air ambulance services should be arranged to prevent any delays in care delivery.
- 5.2.7 Complex retrieval cases may be escalated as an emergency evacuation if patient condition deteriorates.

### 5.3 ROUTINE REFERRAL

- 5.3.1 Defined as cases where patient is hemodynamically stable and due to the condition &/or unavailability of diagnostics or treatment, transfer of patient to a higher facility is required, however not necessarily time sensitive or urgent.
- 5.3.2 Examples of cases to be considered for routine referral includes, **but not limited to:**
- Bed ridden patient requiring an elective procedure/intervention not available in the referring facility and not fit for sea ambulance.
  - Patient requiring an elective procedure/intervention not available in the referring facility and not fit for sea ambulance.
- 5.3.3 To optimize efficiency of air ambulance service, transfer of routine referral cases is **recommended to be arranged via scheduled flights,** reserving air ambulance service for emergency evacuation and complex retrieval cases.



## 6. GENERAL CONSIDERATIONS FOR ALL REFERRALS

- 6.1 Referring medical officer from health center or specialist from referring hospital should discuss the case and provide accurate information about the patient to the specialist doctor at the receiving health facility.
- 6.2 Decision needs to be made by both the clinicians regarding the mode of transportation that will ensure the appropriate, timely & safe transfer.
- 6.3 Prior to & during transport of patients, all efforts must be taken to ensure safety and minimize the risk of deterioration during retrieval.
- 6.4 Determine availability of beds, staff, and resources etc. at the receiving tertiary care facility prior to patient retrieval.
- 6.5 Provided that a higher-level health facility closer to the referring health facility has the capacity required for the patient care, retrieval need not be done to health facilities in Greater Male' area.

## 7. REFERENCE

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