

GUIDELINE ON TRANSFER OF PAEDIATRIC CARDIOLOGY PATIENTS FROM HIGH-RISK COVID-19 AREAS TO REFERRAL HOSPITAL ACROSS STATE USING AIRPLANE

1. OBJECTIVE

This guideline intends to facilitate the transfer of paediatric cardiology patients from high-risk COVID-19 areas to referral hospital across state using airplane to ensure the continuity of critical paediatric cardiology services during COVID-19 pandemic.

2. PATIENT CATEGORY ACCORDING TO PRIORITY

- 2.1. The transfer of paediatric cardiology patients from high-risk COVID-19 areas to referral hospital across state using airplane has to be based on the priority list shown in **Table 1**.
- 2.2. Emergency cases are given higher priority.
- 2.3. Elective cases have to be postponed until COVID-19 situation has improved.

TABLE 1. PAEDIATRIC CARDIOLOGY CASES ACCORDING TO PRIORITY

Priority 1	<ul style="list-style-type: none"> • Obstructed TAPVD (Total Anomalous Pulmonary Artery Venous Drainage) • Severe cyanosis e.g. Tetralogy of Fallot with severe cyanotic spells, blocked Blalock-Taussig (BT) shunt, Patent Ductus Arteriosus (PDA) or Right Ventricular Outflow Tract (RVOT) stent • Procedural complication e.g. Embolised PDA device, Atrial Septal Defect (ASD) device, PDA stent
Priority 2	<ul style="list-style-type: none"> • Transposition of Great Arteries (TGA) • Patients in severe heart failure due to underlying heart condition • Ventilated patients due to underlying heart condition
Priority 3	<ul style="list-style-type: none"> • Ductal dependent lesions on Prostaglandin infusion • Patients in heart failure and unable to wean off inpatient support due to underlying heart condition
Elective	<ul style="list-style-type: none"> • All other patients

- 2.4. All referral cases have to be agreed upon by the multidisciplinary team made up of Paediatric Cardiologist, Paediatric Intensivist, Paediatric Cardiothoracic Surgeon and Cardiac Anaesthetist at the referral hospital.
- 2.5. The date of transfer to the referral hospital has to be informed to the Paediatric Cardiologist at the referral hospital.

3. PREPARATIONS BEFORE CROSSING STATE

- 3.1. Only one caretaker can accompany if the patient is below 18 years old.
- 3.2. The patient and the caretaker agree to abide by the regulations and restrictions set by both the referring and referral hospitals.
- 3.3. The patient, the caretaker and the accompanying medical team to undergo COVID-19 Real-Time Polymerase Chain Reaction (RT-PCR) test 3 days before departure.
- 3.4. They are allowed to cross state only if their COVID-19 tests are negative. The official COVID-19 test result has to be brought along for inspection by the authority at the airport.
- 3.5. The patient, the caretaker and the accompanying medical team must download and activate MySejahtera application.
- 3.6. They have to monitor their health daily based on the Home Assessment Tool (HAT) in that application.

4. DURING TRAVEL AND ON ARRIVAL AT THE AIRPORT AND THE REFERRAL HOSPITAL

4.1. FLIGHT PROVIDER

4.1.1. MERCY FLIGHT

- 4.1.1.1 The referring hospital to arrange with the Malaysian Armed Forces and the referral hospital the flight schedule and landing time.
- 4.1.1.2 The referring hospital has to inform the date of arrival to the Kuala Lumpur International Airport Health Office (PK KLIA) at least 2 days prior to arrival.

- 4.1.1.3 This is for the purpose of PK KLIA to issue Home Surveillance Order (HSO) and apply wristband.
- 4.1.1.4 The official COVID-19 screening test results are inspected by the authority at the airport.
- 4.1.1.5 The patient, the caretaker and the accompanying medical team will be met by the transport / ambulance from the referral hospital at the airport.

4.1.2. COMMERCIAL FLIGHT

- 4.1.2.1. The purchase of return flight tickets is done by the referring hospital.
- 4.1.2.2. The patient's needs during the flight should be arranged by the referring hospital with the airline.
- 4.1.1.6 The referring hospital has to inform the date of arrival to the Kuala Lumpur International Airport Health Office (PK KLIA) at least 2 days prior to arrival.
- 4.1.1.7 This is for the purpose of PK KLIA to issue Home Surveillance Order (HSO) and apply wristband.
- 4.1.1.8 The official COVID-19 screening test results are inspected by the authority at the airport.
- 4.1.1.9 The patient, the caretaker and the accompanying medical team will be met by the transport / ambulance from the referral hospital at the airport.

4.2. PERSONAL PROTECTIVE EQUIPMENT

- 4.2.1. The caretaker and the accompanying medical team have to wear surgical face mask (+/- eye protection) and practice hand hygiene throughout the journey.

4.3. HEALTHCARE WORKER

- 4.3.1. The medical team from the referring hospital will accompany the patient until the patient is handed over to the referral hospital team at the airport. The medical team will then return to the referring hospital.
- 4.3.2. If there's no return flight on the same day, the accompanying medical team should inform their lodging place to PK KLIA.

5. COVID-19 TESTING, QUARANTINE AND TREATMENT PROCEDURES AT THE REFERRAL HOSPITAL

- 5.1. The patient and the caretaker will be admitted into isolation room upon arrival at the referral hospital after registration.
- 5.2. The patient and the caretaker will undergo COVID-19 RT-PCR test.
- 5.3. If the COVID-19 RT-PCR test is negative:
 - 5.3.1. For arrival by Mercy Flight, the patient and the caretaker will be transferred to general ward without a second COVID-19 RT-PCR test.
 - 5.3.2. For arrival by commercial flight, the patient and the caretaker will undergo a second COVID-19 RT-PCR test after 48 hours from the first test. While waiting for the test result, the patient and the caretaker will remain in isolation room. If the second COVID-19 RT-PCR test is negative, they will be transferred to general ward and given treatment.
 - 5.3.3. After receiving treatment and the patient is certified "fit to fly", the patient and the caretaker are allowed to return to the referring hospital.
- 5.4. If the first or second COVID-19 RT-PCR test is positive for the patient and/or the caretaker:
 - 5.4.1. Both the patient and the caretaker will be referred to and treated at COVID-19 hospital. Surgical treatment or cardiac intervention will be postponed until recovery from COVID-19.
 - 5.4.2. Once the patient and the caretaker have met the discharge criteria at COVID-19 hospital, surgical treatment or cardiac intervention can be resumed at the referral hospital.

6. MANAGING PATIENT AT THE REFERRAL HOSPITAL AFTER TREATMENT

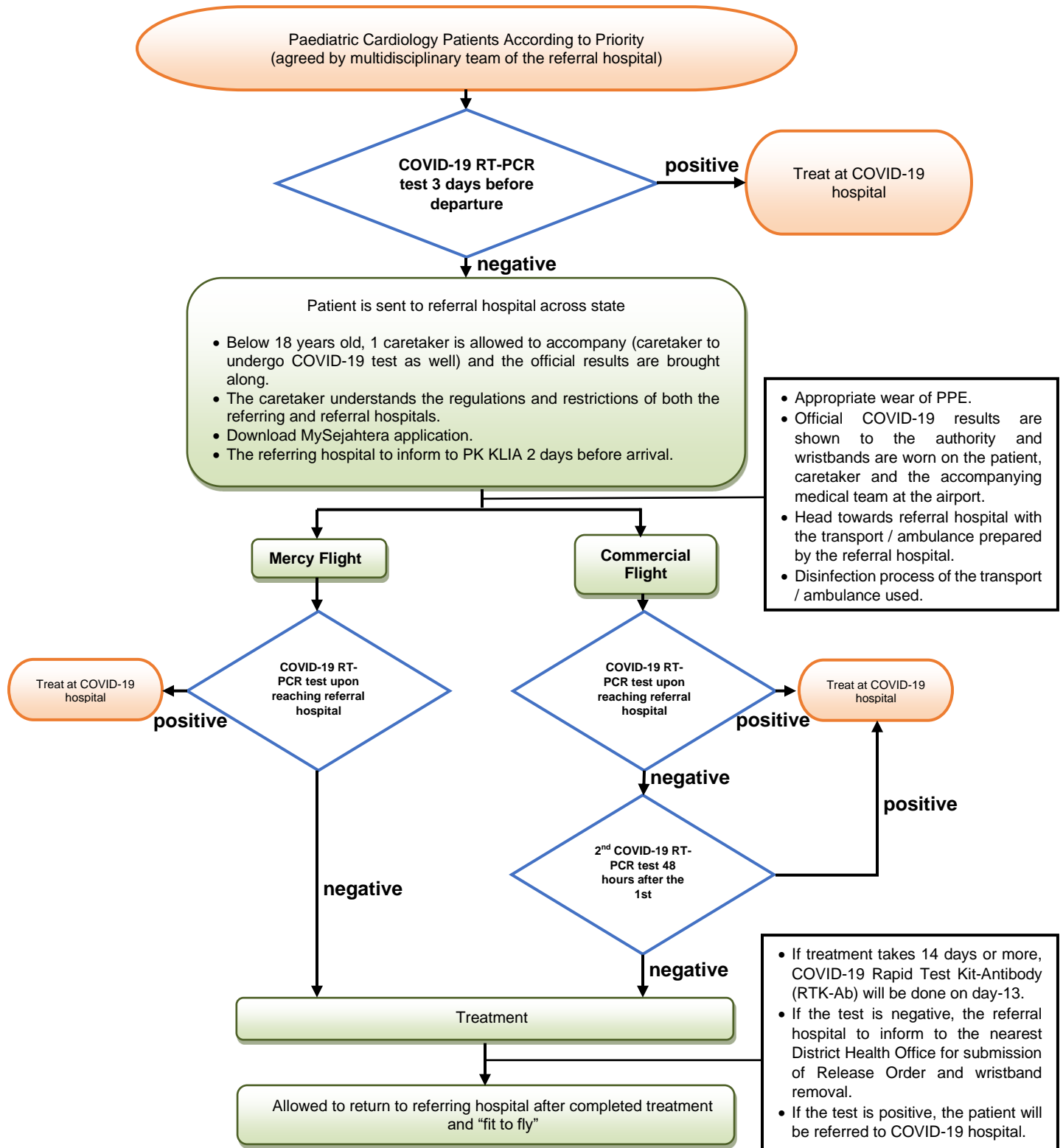
- 6.1. If the treatment takes 14 days or more, COVID-19 Rapid Test Kit-Antibody (RTK-Ab) will be done on day-13. If it is negative, the referral hospital has to inform to the nearest District Health Office for submission of Release Order and wristband removal.
- 6.2. The referral hospital will inform the departure date of the patient at least 2 days prior to the date of arrival.
- 6.3. Patient is certified “fit to fly” by Paediatric Cardiologist to return to the referring hospital.
- 6.4. The patient’s need is to be arranged with the airline company by the referring hospital.
- 6.5. The referring hospital has to arrange the following for the return journey:
 - 6.5.1. Booking and purchase of commercial flight ticket for the medical team who will accompany the patient back.
 - 6.5.2. Transport from the airport to the referral hospital for the medical team to fetch the patient.
- 6.6. The caretaker and the accompanying medical team have to wear surgical face mask (+/- eye protection) and practice hand hygiene throughout the journey.

7. PAYMENT

- 7.1. Payment is done with the existing payment procedures and guidelines set by the Finance Division of Ministry of Health, Malaysia.

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FLOWCHART ON TRANSFER OF PAEDIATRIC CARDIOLOGY PATIENTS FROM HIGH-RISK COVID-19 AREAS TO REFERRAL HOSPITAL ACROSS STATE USING AIRPLANE



REFERENCE:

1. Ministry of Health, Malaysia. *Garis Panduan Pengurusan Kes COVID-19 di Malaysia* (updated 5 October 2020)
2. National Security Council. *SOP Sektor Pelancongan Kesihatan* (Updated 14 October 2020)
3. Ministry of Health, Malaysia. *Covid-19 Educational Toolkits for Hospitals and Other Healthcare Settings* (updated 23 October 2020)