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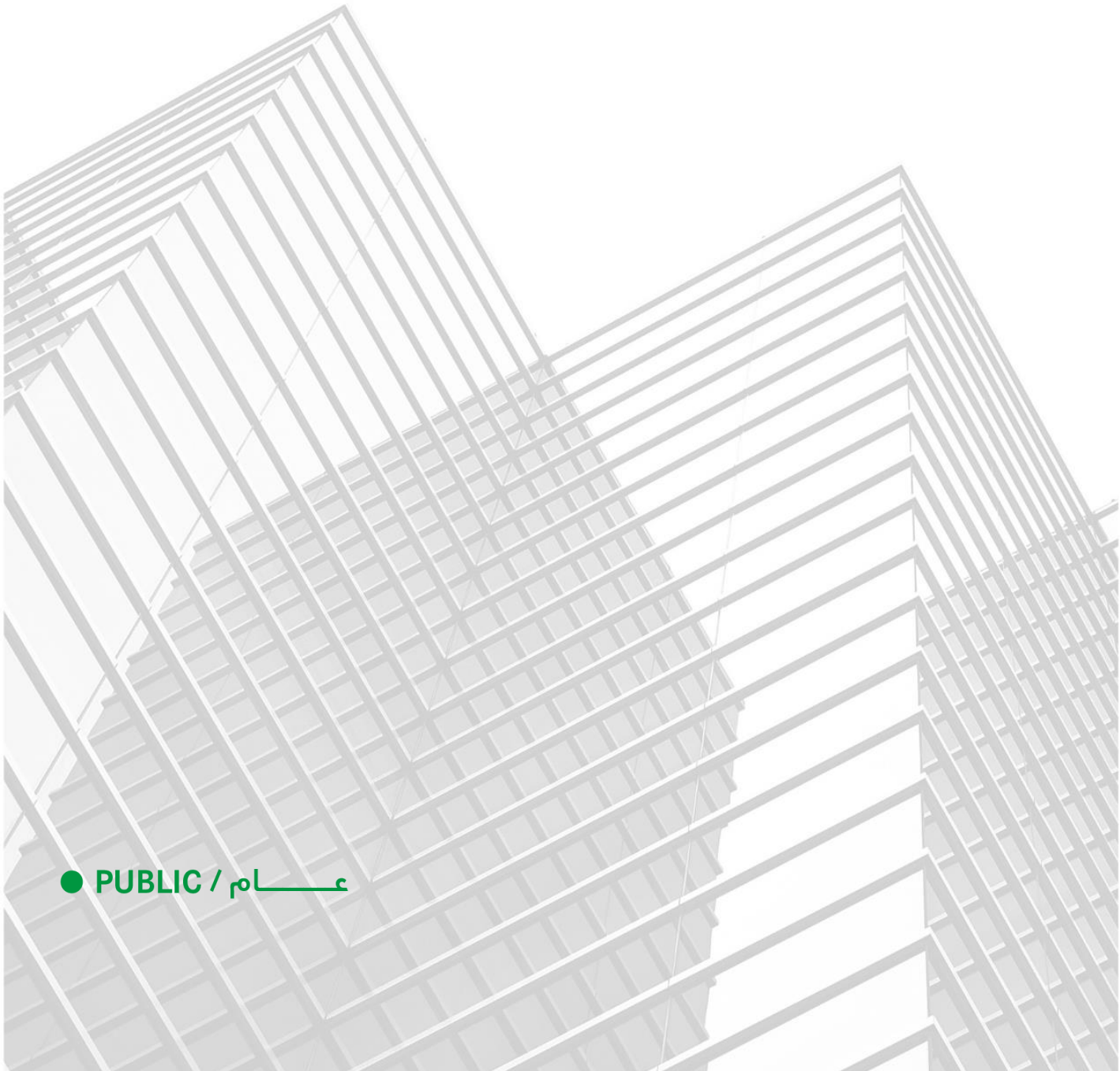
DEPARTMENT OF HEALTH

Referral Guidelines for Pediatric Congenital Heart Disease



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1. Guideline Purpose and Brief

1.1 These guidelines identify referral criteria for pediatric congenital heart disease to center of excellence.

2. Definitions and Abbreviations

No.	Term	Definition
2.1	Acuity level	Is a measurement of the level of care a patient need based on the severity of either an illness or mental condition.
2.2	High dependency care	Also called “step-down” or “intermediate care” offers a less intensive for patients who either do not, or no longer, require intensive care

No.	Abbreviation	Definition
2.3	CoE	Center of excellence
2.4	DoH	Department of Health
2.5	ICU	Intensive care unit
2.6	MDT	Multidisciplinary team
2.7	NPO	NPO stands for "nil per os", or "nothing by mouth

3. Guideline Content

3.1 Circumstances to consider for referral to CoE under the discretion of the referring hospital.

3.1.1 All patients who require surgical intervention

3.1.2 All high-risk patients who require Diagnostic and Interventional cardiac catheterization procedures

3.1.3 All patients who require intensive care or high dependency care for management of current problems

3.1.4 All patients who require tertiary level medical care for management of current problems

3.1.5 All high-risk patients who require non-cardiac surgical and medical interventions

3.2 Perioperative Management of Patients with Congenital Heart Disease

3.2.1 Clinical history and physician examination

3.2.2 Laboratory Data: Complete blood count; erythrocytosis, Serum electrolytes; and Coagulation profile

3.2.3 Imaging and Additional Tests: Chest X-ray, ECG, Echocardiography and Transesophageal echocardiogram

3.2.4 Exercise tests or stress tests.

3.2.5 Specific Studies: Cardiac catheterization, cardiac CT scan, Cardiac MRI, right ventricle and left ventricle function, pulmonary blood flow

3.2.6 Preoperative Preparation: The general rule of 2,4,6,8 for NPO intervals in neonates, infants, and children with congenital heart disease, e.g., 2 hours for clear liquids, 4 hours for breast milk, 6 hours, and 8 hours for solid food.

3.3 Timely referral of patients for management of congenital heart disease

3.3.1 When there is a patient in another facility needing referral to CoE for surgery, the referring physician calls an on-call CoE physician.

3.3.2 The referral information should include the following but limited to

3.3.2.1 Diagnosis.

3.3.2.2 Diagnostic and Therapeutic Procedures Performed

3.3.2.3 Relevant Medical History, Allergies and Co-morbidity.

3.3.2.4 Significant Medications Given and Discharge Medications.

3.3.2.5 Reason for Referral.

3.3.2.6 Acuity level

3.3.2.7 Transfer Instructions/Information

3.3.2.8 Significant Physical and Other Findings.

3.3.2.9 Patient's Condition/Status with clear explanation.

3.3.2.10 Patient's hemodynamic status (if applicable).

3.3.2.11 Follow-up Instructions/Information.

3.3.2.12 Date and Time of referral.

3.3.2.13 Consent

3.3.3 Once referral information is received, the on-call CoE physician discusses the case with surgeon on call and/ OR ICU physician on call to determine the need for cardiac care. Once a patient is accepted, the patient is transferred to ICU, or cardiac ward based on the need for level of care.

3.3.4 Because of the potential for rapid clinical deterioration, patients who present with severe disease or who have a high likelihood of clinical deterioration should be considered for timely transfer.

3.3.5 The transfer process should be initiated as early as possible in the patient's course.

3.3.6 Both referring and receiving facilities should use the patient referral in and out registry form (appendix 2)

3.3.7 In case of rejecting the case by center of excellence

3.3.7.1 The CoE should notify DoH (CoE coe@doh.gov.ae) within 24 hr. of rejection.

3.3.7.2 The CoE should provide DoH (CoE coe@doh.gov.ae) with a medical report related to the case including clear justification of rejection and continuity of care related to the case within 72 hr. of rejection.

3.3.7.3 The CoE should provide DoH with rejection and acceptance rates monthly.

3.4 Stabilization and preparation for transport

3.4.1 Upon identification of a patient who may require transfer, immediately contact Admission Transfer Center as described in flow chart below to arrange transfer.

3.4.2 Once transfer is recommended, the consulting facility should reply to the sending facility, within 15 minutes, whether or not a bed will be available for transfer. If a bed is not available, the consulting facility should advise the sending facility on appropriate management of the patient in terms of stabilization and ongoing care as required.

3.4.3 The referring physician is responsible for contacting the accepting hospital and securing an accepting physician at the receiving facility.

3.4.4 The accepting physician should determine the transfer location e.g., Intensive Care Unit, High Dependency Unit or Ward.

3.4.5 The referring physician should make an assessment as to whether the patient requires intubation for safe transport to the higher level of care.

3.4.6 Should a patient's clinical status change (for better or worse) prior to departure from the hospital, it is imperative that the referring physician inform the receiving physician of the change in clinical status.

3.4.7 All reasonable efforts should be made to obtain a reliable cell phone number for the patient and for responsible family members.

3.5 Transport patient with should be as per DoH standards.

3.5.1 Medical Record including treatment rendered.

3.5.2 Signed consent to transfer patient to receiving facility.

3.5.3 Documentation of medications given; and

3.5.4 X-ray, imaging, and laboratory results. Include a CD with any relevant imaging.

3.6 Upon Arrival

3.6.1 Patient should be received by appropriate team in the designated ward and Cardiologist on call contacted to review the patient for further management. MDT discussion should be conducted for each arrival at an appropriate time as required.

3.6.2 Emergency cases should be prepared to be taken to the operating room as soon as possible.

3.6.3 Urgent cases requiring surgery/intervention should be stabilized, reassessed, and undergo MDT discussion with regards to plan of management including surgery/interventions.

3.7 Postoperative Intensive Care Management

3.7.1 A multidisciplinary team involves coordinating multiple healthcare professionals (cardiac surgeon, cardiologist, intensivist, anesthetist, pediatrician, respiratory therapist, and cardiac critical care-trained nurse). The successful outcome in the postoperative critical care management of any cardiac surgical patient who has undergone a surgical procedure for congenital heart disease is due to effective postoperative care of such patients, and it includes:

3.7.1.1 Continuous monitoring of cardiac hemodynamic functions, pulmonary, and other vital organs such as the kidney, liver, and central nervous system is necessary.

3.7.1.2 The prompt appropriate action to restore normal function whenever deviations from normal are identified.

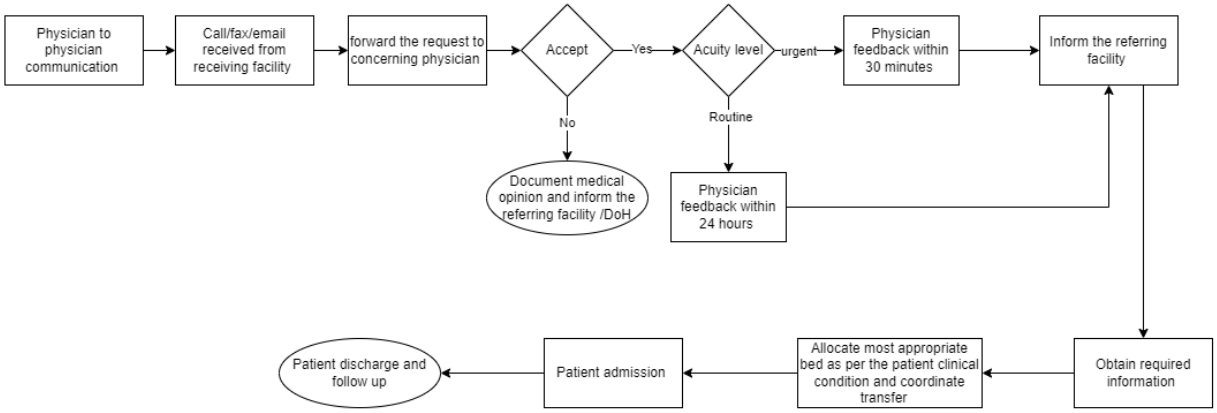
3.8 Family & Carers

3.8.1 Family and Carers will be supported and will be kept always informed about the management plans for the patient during the current admission.

4.Relevant References Documents			
No.	**Reference Date**	**Reference Name**	**Relation Explanation / Coding / Publication Links**
1	Jan 2015	The Impact of the Organization of High-Dependency Care on Acute Hospital Mortality and Patient Flow for Critically Ill Patients	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4347435/
2	Jan 2016	HAAD GUIDELINES FOR PATIENT CONSENT	https://www.doh.gov.ae/en/resources/guidelines
3	September 2019	Indian guidelines for indications and timing of intervention for common congenital heart diseases: Revised and updated consensus statement of the Working group on management of congenital heart diseases	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6716301/
4	September 2022	ABU DHABI HEALTHCARE INFORMATION AND CYBER SECURITY WORKFORCE GUIDELINE	https://www.doh.gov.ae/en/resources/guidelines

5	November 2022	Suspected heart disease in infants and children: Criteria for referral	https://www.medilib.ir/uptodate/show/5765
6	December 2022	Patient Referral and Inter-Facility Transfer	https://www.dha.gov.ae/uploads/112021/292fc269-7896-4f99-9985-12c9931baf82.pdf
7	September 2023	Perioperative Management of Patients with Congenital Heart Disease	https://www.ncbi.nlm.nih.gov/books/NBK585103/
8	February 2024	Critical Congenital Heart Disease	https://health.mo.gov/living/families/genetics/birthdefects/cchd.php#:~:text=Critical%20congenital%20heart%20disease%20(CCHD,blood%20flow%20throughout%20the%20body.
9	April 2024	What are High and Low Acuity Patients?	https://www-stage.mdally.com/insight/high-and-low-acuity-patients/

Appendix 1: Referral Pathway



Appendix 2: Patient Referral out registry form

Patient Name	
Patient MRN	
Patient EID	
Patient Age	
Patient Gender	
Referring Facility Name	
Receiving Facility Name	
Referral date and time	
Acuity Level	
Reason of Referral	
Referral accepted or not (with justification)	

Patient Referral in registry form

Patient Name	
Patient MRN	
Patient EID	
Patient Age	
Patient Gender	
Referring Facility Name	
Receiving Facility Name	
Receiving Date and Time	
Acuity Level	
Reason of referral	
Referral accepted or not (with justification)	