

Triage Protocol for Paediatrics Emergencies and their Referrals in Pre-Hospital and Emergency Department (ED) Settings: EMS-Driven and Self-Presenting Emergency Departments' Arrivals



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ABOUT DEPARTMENT OF HEALTH ABU DHABI (DOH)

The Department of Health (DOH) previously known as the Health Authority Abu Dhabi (HAAD) is the regulative body of the Health System in the Emirate of Abu Dhabi and seeks excellence in Health for the community by regulating and monitoring the health status of the population. DOH shapes the regulatory framework for the health system, inspects against regulations, enforces regulations, and encourages the adoption of best practices and performance targets by all health service providers. DOH also drives programs to increase awareness and adoption of healthy living standards among the residents of the Emirate of Abu Dhabi in addition to regulating scope of services, premiums and reimbursement rates of the health system in the Emirate of Abu Dhabi.

The Health System of the Emirate of Abu Dhabi is comprehensive, encompasses the full spectrum of health services and is accessible to all residents of Abu Dhabi. The health system encompasses, providers, professionals, patients, insurers and the regulator. Providers of health services include public and private services and the system is financed through mandatory health insurance (with the exception to Thiqa) and has three main sources of financing: Employers or Sponsors, the Government and Individuals. The Health Insurance scheme places responsibilities on any Insurer, Broker, Third Party Administrator, Health Provider, Employer, Sponsor (including educational establishments), Limited Income Investors and Insured Persons to participate in the Health Insurance Scheme.

ABBREVIATIONS

- ATLS: Advanced Trauma Life Support.
- CASMEET: The necessary information and reporting mechanism that EMS or ED staff are required follow in order to pass concise and reliable information to the receiving facilities (see Appendix 3 for details).
- ED: Emergency Department.
- EMS: Emergency Medical Services.
- ESL1 and ESL2: Emergency Severity 1 & 2.
- PICU: Paediatric Intensive Care Unit.

1. Introduction

One of the priorities of the Department of Health (DOH) previously known as the Health Authority - Abu Dhabi (HAAD) is to achieve an integrated patient-centric model of care, where the right care of time critical emergencies is coordinated and delivered in the right place, by the right expertise, at the right time without interruption, unless clinically justified, and irrespective of healthcare insurance coverage.

This Protocol focuses on paediatric emergency and seeks to ensure that:

- No paediatric emergency case is rejected irrespective of healthcare insurance coverage.
- EMS take paediatric emergency cases to a facility capable of dealing with the specific type and level of emergency.
- Facilities that are not designated to dealing with the specific type and level of self-presented paediatric emergencies transfer patients to designated facilities as quickly as possible.
- EDs designated to dealing with the specific type and level of self-presented paediatric emergencies keep and treat them.

This protocol was developed in consultation with the DOH (previously HAAD) -led Paediatric Taskforce, under the Multi-stakeholder platform to drive integration of care. For a list of member organization and their representatives, refer to Appendix 1.

2. Main Objective

The main objective of this document is to define the triage process that EMS and healthcare facilities must follow for paediatric emergencies for both EMS-driven and self-presenting cases.

3. Sub-objectives

The above objective is achieved through the fulfilment of the following sub-objectives:

- 3.1. Define Emergency Severity Levels (ESL) for paediatric patients applied by EDs, to govern paediatric patients' flow to the appropriate level of care (Appendix 2).
- 3.2. Specify the required data and reporting mechanism to be followed when conveying patient information to receiving facility (Appendix 3).
- 3.3. List of designation criteria for Paediatric Emergencies (Appendix 4).
- 3.4. List of currently designated facilities with Paediatric Emergency services (Appendix 5).

4. Scope

This Protocol applies to all healthcare facilities within the Emirate of Abu Dhabi and Emergency Medical Services (EMS).

5. Definitions

- 5.1. **Adult:** 18 years and above.
- 5.2. **Emergency Department (ED):** every facility that complies with DOH's definition as per HAAD's Standard for Emergency Departments.¹
- 5.3. **Emergency Medical Services:** ambulances deployed through the emergency number 999.
- 5.4. **Emergency Severity Level 1 (ESL 1):** patients in this category of paediatric emergency are at the highest acuity, and need to be cared for in a Paediatric Emergency Service.
- 5.5. **Emergency Severity Level 2 (ESL 2):** patients in this category of paediatric emergency are at lower acuity, and can be stabilised in any ED.
- 5.6. **Paediatric Emergency Services:** any ED that can deal with ESL1 paediatric emergencies as per designation criteria (Appendix 4).
- 5.7. **Paediatric:** zero to less than 18 years, including adolescents subgroup 12 to less than 18 years.
- 5.8. **Urgent Care Centre:** every facility that complies with DOH's definition as per HAAD's Standard for Emergency Departments.²

6. Triage for EMS-Driven Paediatric Emergencies

EMS conduct triage as per Ambulance Field Triage Criteria³ to establish the type of emergency needed by the paediatric patient and the necessary level of care. For all paediatric emergencies – excluding trauma⁴ the patient will be first transported to the closest ED to be stabilised:

- 6.1. EMS contact the closest ED to alert them about the incoming emergency.
- 6.2. EMS communicate the patient's data to the ED of the receiving facility as per CASMEET (Appendix 3).
- 6.3. Upon stabilisation the ED assesses the Emergency Severity Level criteria for Paediatrics Emergency (Appendix 2) to evaluate the need to transfer the paediatric patient after stabilization.
- 6.4. IF ESL1 is established the referring ED should contact the closest facility with a paediatric emergency service to alert it about the incoming ESL1 emergency:
 - 6.4.1. Ambulance Transfer: interfacility transfer must be carried out with an ambulance service that complies with HAAD's Ambulance related Standard.⁵
 - 6.4.2. Data Exchange: the referring ED carries out a clinical handover to the receiving facility to exchange all the necessary data (Appendix 3).

¹ HAAD Standard for Emergency Departments in the Emirate of Abu Dhabi (2017).

² Ibid.

³ As per Ambulance Clinical practice Guidelines 2015

⁴ For Trauma cases please refer to the "Triage Protocol for Trauma Emergencies and their Referrals in Pre-Hospital and Emergency Department (ED) Settings: EMS-Driven and Self-Presenting Emergency Departments' Arrivals".

⁵ HAAD Standard for Minimum Preparedness for Common Medical Emergencies In Inpatient Care Setting, Outpatient Care Setting, Ambulance Services and Interfacility Patient Transfer.

- 6.4.3. Time Limit: interfacility transfer must be carried out by an ambulance (either internal or external) that complies with HAAD's relevant Standard⁶ within 2-4 hours of emergency arrival to the ED.
- 6.4.4. Unconditional acceptance: the receiving paediatric emergency service will accept the patient irrespective of bed availability or insurance cover.⁷

⁶ Ibid.

⁷ HAAD Circular on Treatment of Emergency Cases For non UAE Nationals (HSS-33/2007).

7. Triage for Self-Presenting Paediatric Emergencies

- 7.1. If any self-presenting paediatric emergency patient arrives to the ED of a facility with a paediatric emergency services, he will be cared for using the respective facility's paediatric protocol.
- 7.2. If a self-presenting paediatric emergency patient arrives to the ED of a facility with no paediatric emergency services, he will be assessed against the Emergency Severity Level criteria (Appendix 2) to establish need for transfer.
- 7.3. IF ESL2 is established the emergency is treated in the ED as per internal ED management protocol of paediatric emergencies.
- 7.4. IF ESL1 is established the referring ED should contact the closest facility with a paediatric emergency service to alert them about the incoming ESL1 emergency:
 - 7.4.1. Ambulance Transfer: interfacility transfer must be carried out with an ambulance service that complies with HAAD's Ambulance related Standard.⁸
 - 7.4.2. Data Exchange: the referring ED carries out a clinical handover to the receiving facility to exchange all the necessary data (as per Appendix 3).
 - 7.4.3. Time Limit: interfacility transfer must be carried out by ambulance (either internal or external) that complies with HAAD's relevant Standard⁹ within 2-4 hours of emergency arrival to the ED.
 - 7.4.4. Unconditional acceptance: the receiving paediatric emergency service will accept the patient irrespective of bed availability or insurance cover.¹⁰

⁸ HAAD Standard for Minimum Preparedness for Common Medical Emergencies In Inpatient Care Setting, Outpatient Care Setting, Ambulance Services and Interfacility Patient Transfer.

⁹ Ibid.

¹⁰ HAAD Circular on Treatment of Emergency Cases For non UAE Nationals (HSS-33/2007).

8. Enforcement and Compliance

DOH will enforce the compliance of all concerned stakeholders with this Protocol to ensure that:

- No paediatric emergency is rejected irrespective of healthcare insurance coverage.
- EMS take paediatric emergency cases to a facility capable of dealing with the specific type and level of emergency.
- Facilities that are not designated to dealing with the specific type and level of self-presented paediatric emergencies transfer patients to designated facilities as quickly as possible.
- EDs designated to dealing with the specific type and level of self-presented paediatric emergencies keep and treat them.

DOH may impose sanctions in relation to any breach of requirements under this Protocol in accordance with Chapter IX, HAAD Policy on Complaints, Investigations, Regulatory Action and Sanctions, The Healthcare Regulator Policy Manual Version 1.0.

9. Appendices

9.1. Appendix 1

Trauma Task Force Members and Experts

Member	Organisation
Dr. Maitha Al Darei	Abu Dhabi Police Ambulance
Khaled Mohammed Al Kaabi	Abu Dhabi Police Ambulance
Mahmoud Mohammed Al Baloushi	Abu Dhabi Police Ambulance
Mohammed Naser Al Bahri	Abu Dhabi Police Ambulance
Dr. Mazin Alsaïdi	ADNOC
Dr Zaka Khan	Al Noor Hospital
Dr.Charles F Stanford	Burjeel Hospital (VPS)
Dr. Howard S. Podolsky	Cambridge Medical and Rehabilitation Centre
Dr. Hatem Abueida	Daman
Dr. Wafa Al Mahri	Daman
Mr. Mohammed Abu Jubara	Daman
Michelle Navalta	National Ambulance
Dr. Sanjayan Bhanu	NMC Hospital
Dr. Anwar Salam	SEHA
Khaldoon Hamad Salem Al Khaldi	SEHA
Rizwana Altaf	SEHA
Ruth Taylor	SEHA
Dr. Aiman Rahmani	Tawam Hospital
Dr. Thiagarajan Jaiganesh	Tawam Hospital
Dr. Lalu Chacko	VPS
Dr. Saleh Fares	Zayed Military Hospital

9.2. Appendix 2

Emergency Severity Levels (ESL) for Paediatric Patients

ESL1 - Patients that exhibit any of the symptoms below are at the highest acuity, and need to be cared for in a paediatric emergency service:

- Respiratory arrest
- Cardiopulmonary arrest
- Major head trauma with hypoventilation
- Active seizures
- Unresponsiveness
- Petechial rash in a patient with altered mental status (regardless of vital signs)
- Respiratory failure:
 - ✓ Hypoventilation
 - ✓ Cyanosis
 - ✓ Decreased muscle tone
 - ✓ Decreased mental status
 - ✓ Bradycardia (late finding, concerning for impending cardiopulmonary arrest)
- Shock/sepsis with sign of hypoperfusion
 - ✓ Tachycardia
 - ✓ Tachypnea
 - ✓ Alteration in pulses: diminished or bounding
 - ✓ Alteration in capillary refill time >3-4 seconds
 - ✓ Alteration in skin appearance: cool/mottled or flushed appearance
 - ✓ Widened pulse pressure
 - ✓ Hypotension (often a late finding in the prepubescent patient)
- Anaphylactic reaction (onset in minutes to hours):
 - ✓ Respiratory compromise (dyspnea, wheeze, stridor, hypoxemia)
 - ✓ Reduced systolic blood pressure
 - ✓ Hypoperfusion (eg. syncope, incontinence, hypotonia)
 - ✓ Skin and/or mucosal involvement (hives, itch-flush, swollen lips, tongue or uvula)
 - ✓ Persistent gastrointestinal symptoms

ESL2 - Patients that exhibit any of the symptoms below are at lower acuity, and can be stabilised in a general ED:

- Syncope
- Immunocompromised patients with fever
- Hemophilia patients with possible acute bleeds
 - ✓ Joint pain or swelling
 - ✓ History of fall or injury
 - ✓ Vital signs and/or mental status outside of baseline
- Febrile infant <28 days of age with fever $\geq 38.0^{\circ}\text{C}$ rectal
- Hypothermic infants <90 days of age with temperature $<36.5^{\circ}\text{C}$ rectal
- Suicidality
- Rule out meningitis (headache/stiff neck/fever/lethargy/irritability)

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- Seizures-prolonged postictal period (altered level of consciousness)
- Moderate to severe croup
- Lower airway obstruction (moderate to severe)
 - ✓ Bronchiolitis
 - ✓ Reactive airway disease (asthma)
 - ✓ Respiratory distress:
 - Tachypnea
 - Tachycardia
 - Increase effort (nasal flaring, retractions)
 - Abnormal sounds (grunting)
 - Altered mental status

9.3. Appendix 3

CASMEET: The necessary information and reporting mechanism that EMS or ED staff are required follow in order to pass concise and reliable information to the Trauma receiving facilities (CASMEET).

- C – Call sign and CAD number
- A – Age of patient
- S – Sex of patient
- M– Mechanism of Injury or Mode of illness
- E – Examination, AVPU / GCS, RR, HR, BP & SPO2 (**where applicable**)
- E – Estimated time of arrival
- T – Treatment given
- Trauma Level if available.

9.4.Appendix 4

Designation Criteria for Paediatric Emergency Services

- An ED with a designated area for the assessment and management of paediatric patients.
- A fully trained and certified personnel in paediatric emergency medicine (fellowship, ATLS certified).
- Paediatric trained nurses.
- The availability of the following paediatric subspecialties:
 - Neonatology
 - Paediatric surgery
 - Paediatric trauma
 - Paediatric anesthesia
- The availability of PICU
- Access to a regional blood bank.

9.5.Appendix 5

List of Currently Designated Facilities with Pediatric Emergency Services:

- Sheikh Khalifa Medical City (SKMC)
- Tawam Hospital