



دائرة الصحة
DEPARTMENT OF HEALTH

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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 programmes 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

- **BE FAST:** Balance, Eyes, Face, Arm, Speech, and Time to act immediately.
- **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.

1. Introduction

One of the priorities of the Department of Health (DOH) 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 Hyperacute Stroke emergencies and seeks to ensure that:

- No Hyperacute Stroke emergency case is rejected irrespective of healthcare insurance coverage.
- EMS take Hyperacute Stroke 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 Hyperacute Stroke emergencies transfer patients to designated facilities as quickly as possible.
- EDs designated to dealing with the specific type and level of self-presented emergencies keep and treat them.

This protocol was developed in consultation with the DOH (previously HAAD) - led Stroke Taskforce, under the Multi-stakeholder platform to drive integration of care. For a list of member organisations 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 all healthcare facilities must follow for Hyperacute Stroke 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 Activation Trigger Criteria for Hyperacute Stroke, which govern the flow of patients to the appropriate facility (**Appendix 2**).
- 3.2 Specify the required data and reporting mechanism to be followed when conveying patient information to the “Emergency Operations Coordination Centre” and the receiving facility (**Appendix 3**).
- 3.3 Define the designation criteria for institutions to become eligible as Stroke Centres. (**Appendix 4**)
- 3.4 List of currently designated Comprehensive Stroke Centres (**Appendix 5**).

4. Scope

This Protocol applies to all healthcare facilities within the Emirate of Abu Dhabi, Emergency Medical Services and the “Emergency Operations Coordination Centre”.

5. Definitions

- 5.1 **Comprehensive Stroke Centre:** A tertiary referral centre with a defined remit to provide Hyperacute Stroke Therapy that meet the designation criteria detailed in Appendix 4. It is the highest level that can be achieved by a stroke-care programme. A list of existing Comprehensive Stroke Centres in Abu Dhabi (island) is available in Appendix 5.
- 5.2 **BE FAST Tool:** a tool to help healthcare providers and the public quickly recognise a patient's symptoms as suggestive of a stroke and know when to call 999.
- 5.3 **Emergency Department (ED):** every facility that complies with DOH's definition as per HAAD's Standard for Emergency Departments.¹
- 5.4 **Emergency Medical Services:** ambulances deployed through the emergency number 999.
- 5.5 **Emergency Operations Coordination Centre:** is the coordinating unit for all pre-hospital services with ambulances. At the time of publication, Cleveland Clinic Abu Dhabi service is managing this Centre for Abu Dhabi and can be contacted through the number 056 417 4608. SEHA is managing this service for the Eastern Region.

6. Triage for EMS-Driven Hyperacute Stroke Emergencies

EMS conduct triage as per Ambulance Field Triage Criteria² to establish a Hyperacute Stroke emergency. All Hyperacute Stroke emergencies shall be directly transferred to the closest designated Comprehensive Stroke Centre. In case the designated Comprehensive Stroke Centre is not within a reasonable transport distance,³ all Hyperacute Stroke emergencies will be first transported to the closest ED to be stabilized:

- 6.1 EMS contact the Emergency Operations Coordination Centre to alert them about the incoming emergency and requests a designated Comprehensive Stroke Centre.
- 6.2 EMS communicate the patient's data to the Emergency Operations Coordination Centre as per CASMEET (Appendix 3).
- 6.3 The Emergency Operations Coordination Centre communicates the patient's data to the designated Comprehensive Stroke Centre as per CASMEET (Appendix 3).
- 6.4 EMS transfer the Hyperacute Stroke emergency case to the designated Comprehensive Stroke Centre.
- 6.5 If the patient is transported to the nearest ED and not to a designated Comprehensive Stroke Centre, the ED should assess the patient for potential transfer (Appendix 2). If the patient needs to be admitted to the designated Comprehensive Stroke Centre the patient should be transferred immediately after stabilisation.
- 6.6 The referring ED should contact the closest designated Comprehensive Stroke Centre to alert them about the incoming Hyperacute Stroke emergency:

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

² As per Ambulance Clinical practice Guidelines 2015.

³ Defined as 45 minutes as per Ambulance Clinical practice Guidelines 2015.

- Ambulance Transfer: interfacility transfer must be carried out with an ambulance service (either internal or external) that complies with DOH's (previously HAAD's) Ambulance related Standard.⁴
- Data exchange: the referring ED carries out a clinical handover to the Comprehensive Stroke Centre to exchange all the necessary patient data (Appendix 3).
- Time limit: interfacility transfer must be carried out by an ambulance that complies with DOH's (previously HAAD's) relevant Standard⁵ immediately after stabilisation.
- Unconditional acceptance: the receiving Comprehensive Stroke Centre will accept the patient irrespective of bed availability or insurance cover.⁶

7. Triage for Self-Presenting Hyperacute Stroke Cases

- 7.1. If a self-presenting patient walks into a designated Comprehensive Stroke Centre, existing Hyperacute Stroke protocol apply.
- 7.2. If a self-presenting patient with symptoms of Hyperacute Stroke arrives at a facility that is not designated as a Comprehensive Stroke Centre:
 - 7.2.1. ED Physician assesses patient against the Activation Trigger Criteria for Hyperacute Stroke (Appendix 2).
 - 7.2.2. If the Activation Trigger Criteria for Hyperacute Stroke do not apply, the patient will be stabilised.
 - 7.2.3. If the Activation Trigger Criteria are met for Hyperacute Stroke, the referring ED should immediately contact the closest designated Comprehensive Stroke Centre to alert them about the incoming Hyperacute Stroke emergency:
 - Ambulance Transfer: interfacility transfer must be carried out with an ambulance service (either internal or external) that complies with HAAD's Ambulance related Standard.⁷
 - Data exchange: the referring ED carries out a clinical handover to the Comprehensive Stroke Centre to exchange all the necessary patient data (Appendix 3).
 - Time limit: an ambulance that complies with DOH's (previously HAAD's) relevant Standard⁸ must immediately carry out the interfacility transfer.
 - Unconditional acceptance: the receiving Comprehensive Stroke Centre will accept the patient irrespective of bed availability or insurance cover.⁹

⁴HAAD Standard for Minimum Preparedness for Common Medical Emergencies In Inpatient Care Setting, Outpatient Care Setting, Ambulance Services and Interfacility Patient Transfer.

⁵ Ibid.

⁶ HAAD Circular on Treatment of Emergency Cases For non UAE Nationals (HSS-33/2007).

⁷ HAAD Standard for Minimum Preparedness for Common Medical Emergencies In Inpatient Care Setting, Outpatient Care Setting, Ambulance Services and Interfacility Patient Transfer.

⁸ Ibid.

⁹ 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 Hyperacute Stroke emergency case is rejected irrespective of healthcare insurance coverage.
- EMS take Hyperacute Stroke 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 Hyperacute Stroke emergencies do transfer patients to designated facilities as quickly as possible.
- EDs designated to dealing with the specific type and level of self-presented emergencies do 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

Stroke Task Force Members and Experts

Members	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
Capt. 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. Dominic Venne	CCAD
Dr. Tomislav Mihaljevic	CCAD
Dr. Jose Lopez	CCAD
Dr. Hatem Abueida	Daman
Dr. Wafa Al Mahri	Daman
Mohammed Abu Jubara	Daman
Dr Omar Najim	DOH
Dr. Asma Al Mannaï	DOH
Dr. Kamleh Khatib	DOH
Dr. Zainab Khazaal	DOH
Mohamad Al Hameli	DOH
Samiya Naseer	DOH
Michelle Navalta	National Ambulance
Dr. Ravi Arora	NMC Hospital
Rizwana Altaf	SEHA
Ruth Taylor	SEHA
Dr Abdul Majeed Al Zubaidi	SKMC
Dr. Saleh Fares	Zayed Military Hospital

9.2. Appendix 2

When to Trigger Stroke Activation

A patient is considered as having a Hyperacute Stroke and is a candidate for Hyperacute Stroke Therapy when they develop acute Stroke Symptoms within the Time Window of 6 hours, as described below. These patients should immediately be directed to a Comprehensive Stroke Centre.

TIME WINDOW

Patient with **witnessed** onset of new stroke symptoms* within last 6 hours.

Patient with new stroke symptoms* first identified within last 6 hours – including “wake-up strokes” and “unknown time of onset strokes”.

Patients with a longer time-period since onset or identification of symptoms may be discussed on a case-by-case basis with the on-call stroke neurologist at the Comprehensive Stroke Centre– especially if the symptoms are suggestive of a posterior circulation stroke and if the symptom onset is within a window of less than 12 to 24 hours.

A) STROKE SYMPTOM IDENTIFICATION

1. Patients being reviewed by EMS with no MD backup:

Use a bedside screening tool to identify patient’s symptoms as suggestive of a stroke

Different ones may be used but **BE FAST** is preferable because it also includes some posterior circulation symptoms commonly missed by other tools

B – Balance

Does the person have a sudden loss of balance?

E – Eyes

Has the person lost vision in one or both eyes?

F – Face

Does the person’s face look lopsided/ asymmetric?

A – Arm

Can the person raise both arms equally?

S – Speech

Is the speech slurred? Does the person have trouble speaking or seem confused?

T – Time to act immediately

Call 999.

9.3. Appendix 3

CASMEET: The necessary information and reporting mechanism that EMS staff are required follow in order to pass concise and reliable information to the Hyperacute Stroke 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 possible)**
- E – Estimated time of arrival
- T – Treatment given

9.4. Appendix 4

Designation Criteria for Comprehensive Stroke Centre

The following criteria are essential for medical institutions to become eligible for a Stroke Centre:

Mandatory criteria:

1. 24-hour emergency room (ER) facility with an on-call neurologist available for a personal consultation
2. 24-hour Stroke response team
3. 24-hour availability of CT and MRI equipment for urgent study within minutes of a patient's arrival at the ER
4. 24-hour Stroke neurologist or neurologists with interest in stroke care
5. 24-hour Neurosurgery consultation
6. Diagnostic neuroradiology consultation
7. Active 24-hour program to deliver emergency intravenous therapies to appropriate stroke patients
8. 24-hour Interventional neuroradiology staff for diagnostic and/or therapeutic angiography to deliver pharmacological or mechanical therapeutic services
9. Vascular laboratory (e.g, carotid ultrasound and trans-cranial Doppler) and cardiac imaging facility
10. Inpatient stroke unit and Neurological intensive care unit with appropriate training to handle all stroke patients
11. Neuro-rehabilitation service or close relationship with rehabilitation program(s) that specialize in stroke rehabilitation.

Recommended criteria:

1. Stroke nurse coordinator
2. Continued quality assurance, community education, and medical education for local medical staff and other stroke Centres in that area
3. Ongoing program for primary and secondary stroke prevention
4. Stroke clinic
5. Stroke data bank to collect data applicable for quality assurance, research, and better patient care
6. Active stroke research (basic and/or clinical) programmes.

9.5. Appendix 5

List of Currently Designated Comprehensive Stroke Centres in Abu Dhabi:

1. Cleveland Clinic Abu Dhabi
2. Al Ain Hospital