



دائرة الصحة
DEPARTMENT OF HEALTH

JAWDA Guidelines for Pre-hospital Emergency Medical Service (EMS)

January 2019

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Executive Summary

The Department of Health– Abu Dhabi (DOH) is the regulatory body of the healthcare sector in the Emirate of Abu Dhabi and ensures excellence in healthcare for the community by monitoring the health status of its population.

The Emirate of Abu Dhabi is experiencing a substantial growth in the number of hospitals, centers and clinics. This is ranging from school clinics and mobile units to internationally renowned specialist and tertiary academic centers. Although, access and quality of care has improved dramatically over the last couple of decades, mirroring the economic upturn and population boom of the Abu Dhabi Emirate, however challenges remain in addressing further improvements.

The main challenges that are presented with increasingly dynamic population include an aging population with increased expectation for treatment, utilization of technology and diverse workforce leading to increased complexity of healthcare provision in Abu Dhabi. All of this results in an increased and inherent risk to quality and patient safety.

DOH has developed dynamic and comprehensive quality framework in order to bring about improvements across the health sector. This guidance relates to the quality indicators that DOH is mandating the quarterly reporting against by the operating general and specialist hospitals in Abu Dhabi.

The guidance sets out the full definition and method of calculation for patient safety and clinical effectiveness indicators. For enquiries about this guidance, please contact jawda@DoH.gov.ae

This document is subject for review and therefore it is advisable to utilize online versions available on the DOH website at all times.

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About this Guidance

The guidance sets out the definitions, reporting, and frequency of JAWDA pre hospital Emergency Medical Services (EMS) performance indicators. Department of Health (DoH) with consultation of local and international emergency medical services (EMS) expertise developed emergency medical services performance indicators that are aimed for assessing the degree to which emergency medical service providers competently and safely delivers the appropriate clinical services to the patient within the optimal time period.

The emergency medical services performance indicators in this guidance include measures to monitor i.e., (emergency response time, medical transport, patient assessment and care, and customer service). Ambulance service providers are the most qualified professionals to develop and evaluate quality of care measures for emergency medical services. Therefore, it is crucial that EMD professionals retain a leadership position in defining emergency medical service quality of care.

Who is this guidance for?

All DoH licensed emergency medical services (public and private ambulance services) in the Emirate of Abu Dhabi.

How do I follow this guidance?

Each provider will nominate one member of staff to coordinate, collect, monitor and report waiting time quality performance indicators data as per communicated dates. The nominated healthcare facility lead must in the first instance e-mail their contact details (if different from previous submission) to JAWDA@doh.gov.ae and submit the required quarterly quality performance indicators through Jawda online portal.

What are the Regulation related to this guidance?

- Legislation establishing the Health Sector
- As per [DoH Policy for Quality and Patient Safety](#) issued January 15th 2017, this guidance applies to all DOH Licensed Hospital Healthcare Facilities in the Emirate of Abu Dhabi in accordance with the requirements set out in this Standard.
- [Policy for Integrated Continuum of Pre-hospital and ED Care for Time Critical Conditions](#)

JAWDA Pre-Hospital Emergency Medical Services (EMS) Indicators

Emergency Medical Service Performance Indicators

Type: Emergency Medical Service Indicator Number: EMS001

KPI Description (title):	Emergency Ambulance response time in Urban Areas (city)
Domain	Timeliness of care
Sub-domain	Waiting time
Definition:	Time, in minute, it requires an ambulance to arrive to emergency scene in an urban areas from (time of receiving call through emergency operation center).
Calculation:	<p>Numerator: Number of ambulance responses that arrived at scene within 15 minutes from time of receiving call through emergency operation center.</p> <p>Denominator :: All number of all actioned ambulance calls</p> <p>Exclusion:</p> <ul style="list-style-type: none"> inter-facilities transfer e.g., clinic to hospital or hospital to hospital
Reporting Frequency:	Quarterly
Unit of Measure:	% for performance (<i>minutes</i> for mean, median and min. & max)
Reported Information:	Numerator, Denominator, Indicator Performance (also, mean waiting time, median waiting time, min. & max. waiting time)
Target	90% to all priorities of EMS calls within 15 minutes
Notes for all facilities	
Data Source/ Report Name:	<p>-Ambulance provider intelligence report or any other internally designed system</p> <p>- Applicable to licensed ambulance services</p>

JAWDA Pre-Hospital Emergency Medical Services (EMS) Indicators

Type: Emergency Medical Service **Indicator Number:** EMS002

KPI Description (title):	Emergency Ambulance response time in Rural Areas
Domain	Timeliness of care
Sub-domain	Waiting time
Definition:	Time, in minute, it requires an ambulance to arrive to emergency scene in a rural areas from (time of receiving call through emergency operation center).
Calculation:	<p>Numerator: Number of ambulance responses that arrived at scene within 19 minutes from time of receiving call through emergency operation center</p> <p>Denominator: Total number of all actioned ambulance calls</p> <p>Exclusion:</p> <ul style="list-style-type: none"> inter-facilities transfer e.g., clinic to hospital or hospital to hospital
Reporting Frequency:	Quarterly
Unit of Measure:	% for performance (<i>minutes</i> for mean, median and min. & max)
Reported Information:	Numerator, Denominator, Indicator Performance (also, mean waiting time, median waiting time, min. & max. waiting time)
Target	90% to all priorities of EMS calls within 19 minutes
Notes for all facilities	
Data Source/ Report Name:	<p>-Ambulance provider intelligence report or any other internally designed system</p> <p>- Applicable to licensed ambulance services</p>

JAWDA Pre-Hospital Emergency Medical Services (EMS) Indicators

Type: Emergency Medical Service **Indicator Number:** EMS003

KPI Description (title):	Aspirin Administration in Acute Coronary Syndrome (ACS)
Domain	Effectiveness of care
Sub-domain	Process
Definition:	Percentage of patients assessed by EMS providers that present with symptoms of Acute Coronary Syndrome (ACS) and receive aspirin (ASA).
Calculation:	<p>Numerator: Count all patients exhibiting signs of Acute Coronary Syndrome and receive Aspirin before arrival at the hospital</p> <p>Denominator: All patients meeting ACS criteria</p> <p>Exclusion:</p> <ul style="list-style-type: none"> • Patients who are not transported. • Patients in severe respiratory distress • Patients who do not meet ACS criteria
Reporting Frequency:	Quarterly
Unit of Measure:	% of performance
Reported Information:	Numerator, Denominator, Indicator Performance
Target	90 % of ACS patients receive aspirin before arrival at the hospital
Data Source/ Report Name:	<p>-Ambulance provider intelligence report or any other internally designed system</p> <p>- Applicable to licensed ambulance services</p>

JAWDA Pre-Hospital Emergency Medical Services (EMS) Indicators

Type: Emergency Medical Service Indicator Number: EMS004

KPI Description (title):	Cardiac Arrest Arrival at Hospital with a Pulse
Domain	Effectiveness of care
Sub-domain	Process
Definition:	The percentage of patients who experience Return of Spontaneous Circulation (ROSC, or return of pulses), after suffering a cardiac arrest.
Calculation:	<p>Numerator: Count all patients who have a return of pulse (aka spontaneous circulation) while in EMS care before arrival at a facility.</p> <p>Denominator: All patients with cardiac arrest or presumed cardiac etiology inclusion criteria that arrive at the hospital.</p> <p>Exclusion:</p> <ul style="list-style-type: none"> • Patients who are not transported. • Patients who do not meet cardiac arrest criteria
Reporting Frequency:	Quarterly
Unit of Measure:	% of performance
Reported Information:	Numerator, Denominator, Indicator Performance
Target	≥ 30% of patients with attempted resuscitation by EMS
Data Source/ Report Name:	-Ambulance provider intelligence report or any other internally designed system - Applicable to licensed ambulance services

JAWDA Pre-Hospital Emergency Medical Services (EMS) Indicators

Type: Emergency Medical Service **Indicator Number:** EMS005

KPI Description (title):	STEMI Scene Time
Domain	Effectiveness of care
Sub-domain	Process
Definition:	Time interval that begins when EMS arrives at the patient's location until the ambulance departs to the hospital with the patient who is having an S-T Elevation Myocardial Infarction,
Calculation:	<p>Numerator: Count all STEMI patients who have a scene time interval of less than 15 minutes.</p> <p>Denominator: All patients meeting STEMI alert criteria who are transported to a receiving facility</p> <p>Exclusion:</p> <ul style="list-style-type: none"> • Patients who are not transported. • Patients who do not meet STEMI alert type
Reporting Frequency:	Quarterly
Unit of Measure:	% of performance
Reported Information:	Numerator, Denominator, Indicator Performance
Target	90 % of STEMI patients transported within =< 15 minutes by EMS
Data Source/ Report Name:	-Ambulance provider intelligence report or any other internally designed system - Applicable to licensed ambulance services

JAWDA Pre-Hospital Emergency Medical Services (EMS) Indicators

Type: Emergency Medical Service **Indicator Number:** EMS006

KPI Description (title):	Stroke Scene Time
Domain	Effectiveness of care
Sub-domain	Process
Definition:	Time interval that begins when EMS arrives at the patient's location until the ambulance departs to the hospital with the patient who is exhibiting the signs and symptoms of a stroke.
Calculation:	<p>Numerator: Count all stroke patients who have a scene time interval of less than 15 minutes.</p> <p>Denominator: All patients meeting stroke alert criteria who are transported to a receiving facility</p> <p>Exclusion:</p> <ul style="list-style-type: none"> • Patients who are not transported. • Patients who do not meet stroke alert type
Reporting Frequency:	Quarterly
Unit of Measure:	% of performance
Reported Information:	Numerator, Denominator, Indicator Performance
Target	90 % of stroke patients transported within =< 15 minutes by EMS
Data Source/ Report Name:	<p>-Ambulance provider intelligence report or any other internally designed system</p> <p>- Applicable to licensed ambulance services</p>

JAWDA Pre-Hospital Emergency Medical Services (EMS) Indicators

Type: Emergency Medical Service **Indicator Number:** EMS007

KPI Description (title):	STEMI Alert Transport
Domain	Effectiveness of care
Sub-domain	Process
Definition:	Percentage of patients who are experiencing a ST Segment Elevation Myocardial Infarction (STEMI) event and accept care by EMS who are taken to an appropriate STEMI specialty care facility
Calculation:	<p>Numerator: Count all patients meeting STEMI alert criteria who are transported to a STEMI receiving facility or have a documented reason for exception.</p> <p>Denominator: All patients meeting STEMI alert who are transported to a receiving facility.</p> <p>Exclusion:</p> <ul style="list-style-type: none"> • Patients who are not transported. • Patients who do not meet STEMI alert criteria
Reporting Frequency:	Quarterly
Unit of Measure:	% of performance
Reported Information:	Numerator, Denominator, Indicator Performance
Target	≥ 90% of patients STEMI alert transported with specialty care facility by EMS
Data Source/ Report Name:	<p>-Ambulance provider intelligence report or any other internally designed system</p> <p>- Applicable to licensed ambulance services</p>

JAWDA Pre-Hospital Emergency Medical Services (EMS) Indicators

Type: Emergency Medical Service **Indicator Number:** EMS008

KPI Description (title):	Stroke Alert Transport
Domain	Effectiveness of care
Sub-domain	Process
Definition:	Percentage of patients who are experiencing a stroke and accept care by EMS who are taken to an appropriate stroke specialty care facility.
Calculation:	<p>Numerator: Count all patients meeting stroke alert criteria who are transported to a STROKE receiving facility or have a documented reason for exception.</p> <p>Denominator: All patients meeting stroke alert who are transported to a receiving facility.</p> <p>Exclusion:</p> <ul style="list-style-type: none"> • Patients who are not transported. • Patients who do not meet stroke alert criteria
Reporting Frequency:	Quarterly
Unit of Measure:	% of performance
Reported Information:	Numerator, Denominator, Indicator Performance
Target	≥ 90% of patients stroke alert transported with specialty care facility by EMS
Data Source/ Report Name:	<p>-Ambulance provider intelligence report or any other internally designed system</p> <p>- Applicable to licensed ambulance services</p>

APPENDIX- ICD_10 Diagnosis Codes

Stroke Ischemic:

I63.00	Cerebral infarction due to thrombosis of unspecified precerebral artery
I63.011	Cerebral infarction due to thrombosis of right vertebral artery
I63.012	Cerebral infarction due to thrombosis of left vertebral artery
I63.013	Cerebral infarction due to thrombosis of bilateral vertebral arteries
I63.019	Cerebral infarction due to thrombosis of unspecified vertebral artery
I63.02	Cerebral infarction due to thrombosis of basilar artery
I63.031	Cerebral infarction due to thrombosis of right carotid artery
I63.032	Cerebral infarction due to thrombosis of left carotid artery
I63.033	Cerebral infarction due to thrombosis of bilateral carotid arteries
I63.039	Cerebral infarction due to thrombosis of unspecified carotid artery
I63.09	Cerebral infarction due to thrombosis of other precerebral artery
I63.10	Cerebral infarction due to embolism of unspecified precerebral artery
I63.111	Cerebral infarction due to embolism of right vertebral artery
I63.112	Cerebral infarction due to embolism of left vertebral artery
I63.113	Cerebral infarction due to embolism of bilateral vertebral arteries
I63.119	Cerebral infarction due to embolism of unspecified vertebral artery
I63.12	Cerebral infarction due to embolism of basilar artery
I63.131	Cerebral infarction due to embolism of right carotid artery
I63.132	Cerebral infarction due to embolism of left carotid artery
I63.133	Cerebral infarction due to embolism of bilateral carotid arteries
I63.139	Cerebral infarction due to embolism of unspecified carotid artery
I63.19	Cerebral infarction due to embolism of other precerebral artery
I63.20	Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries
I63.211	Cerebral infarction due to unspecified occlusion or stenosis of right vertebral arteries
I63.212	Cerebral infarction due to unspecified occlusion or stenosis of left vertebral arteries
I63.213	Cerebral infarction due to unspecified occlusion or stenosis of bilateral vertebral arteries
I63.219	Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral arteries
I63.22	Cerebral infarction due to unspecified occlusion or stenosis of basilar arteries
I63.231	Cerebral infarction due to unspecified occlusion or stenosis of right carotid arteries
I63.232	Cerebral infarction due to unspecified occlusion or stenosis of left carotid arteries
I63.233	Cerebral infarction due to unspecified occlusion or stenosis of bilateral carotid arteries

JAWDA Pre-Hospital Emergency Medical Services (EMS) Indicators

I63.239	Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid arteries
I63.29	Cerebral infarction due to unspecified occlusion or stenosis of other precerebral arteries
I63.30	Cerebral infarction due to thrombosis of unspecified cerebral artery
I63.311	Cerebral infarction due to thrombosis of right middle cerebral artery
I63.312	Cerebral infarction due to thrombosis of left middle cerebral artery
I63.313	Cerebral infarction due to thrombosis of bilateral middle cerebral arteries
I63.319	Cerebral infarction due to thrombosis of unspecified middle cerebral artery
I63.321	Cerebral infarction due to thrombosis of right anterior cerebral artery
I63.322	Cerebral infarction due to thrombosis of left anterior cerebral artery
I63.323	Cerebral infarction due to thrombosis of bilateral anterior arteries
I63.329	Cerebral infarction due to thrombosis of unspecified anterior cerebral artery
I63.331	Cerebral infarction due to thrombosis of right posterior cerebral artery
I63.332	Cerebral infarction due to thrombosis of left posterior cerebral artery
I63.333	Cerebral infarction due to thrombosis of bilateral posterior arteries
I63.339	Cerebral infarction due to thrombosis of unspecified posterior cerebral artery
I63.341	Cerebral infarction due to thrombosis of right cerebellar artery
I63.342	Cerebral infarction due to thrombosis of left cerebellar artery
I63.343	Cerebral infarction due to thrombosis of bilateral cerebellar arteries
I63.349	Cerebral infarction due to thrombosis of unspecified cerebellar artery
I63.39	Cerebral infarction due to thrombosis of other cerebral artery
I63.40	Cerebral infarction due to embolism of unspecified cerebral artery
I63.411	Cerebral infarction due to embolism of right middle cerebral artery
I63.412	Cerebral infarction due to embolism of left middle cerebral artery
I63.413	Cerebral infarction due to embolism of bilateral middle cerebral arteries
I63.419	Cerebral infarction due to embolism of unspecified middle cerebral artery
I63.421	Cerebral infarction due to embolism of right anterior cerebral artery
I63.422	Cerebral infarction due to embolism of left anterior cerebral artery
I63.423	Cerebral infarction due to embolism of bilateral anterior cerebral arteries
I63.429	Cerebral infarction due to embolism of unspecified anterior cerebral artery
I63.431	Cerebral infarction due to embolism of right posterior cerebral artery
I63.432	Cerebral infarction due to embolism of left posterior cerebral artery
I63.433	Cerebral infarction due to embolism of bilateral posterior cerebral arteries
I63.439	Cerebral infarction due to embolism of unspecified posterior cerebral artery
I63.441	Cerebral infarction due to embolism of right cerebellar artery
I63.442	Cerebral infarction due to embolism of left cerebellar artery
I63.443	Cerebral infarction due to embolism of bilateral cerebellar arteries
I63.449	Cerebral infarction due to embolism of unspecified cerebellar artery
I63.49	Cerebral infarction due to embolism of other cerebral artery
I63.50	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery

JAWDA Pre-Hospital Emergency Medical Services (EMS) Indicators

I63.511	Cerebral infarction due to unspecified occlusion or stenosis of right middle cerebral artery
I63.512	Cerebral infarction due to unspecified occlusion or stenosis of left middle cerebral artery
I63.513	Cerebral infarction due to unspecified occlusion or stenosis of bilateral middle arteries
I63.519	Cerebral infarction due to unspecified occlusion or stenosis of unspecified middle cerebral artery
I63.521	Cerebral infarction due to unspecified occlusion or stenosis of right anterior cerebral artery
I63.522	Cerebral infarction due to unspecified occlusion or stenosis of left anterior cerebral artery
I63.523	Cerebral infarction due to unspecified occlusion or stenosis of bilateral anterior arteries
I63.529	Cerebral infarction due to unspecified occlusion or stenosis of unspecified anterior cerebral artery
I63.531	Cerebral infarction due to unspecified occlusion or stenosis of right posterior cerebral artery
I63.532	Cerebral infarction due to unspecified occlusion or stenosis of left posterior cerebral artery
I63.533	Cerebral infarction due to unspecified occlusion or stenosis of bilateral posterior arteries
I63.539	Cerebral infarction due to unspecified occlusion or stenosis of unspecified posterior cerebral artery
I63.541	Cerebral infarction due to unspecified occlusion or stenosis of right cerebellar artery
I63.542	Cerebral infarction due to unspecified occlusion or stenosis of left cerebellar artery
I63.543	Cerebral infarction due to unspecified occlusion or stenosis of bilateral cerebellar arteries
I63.549	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebellar artery
I63.59	Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery
I63.6	Cerebral infarction due to cerebral venous thrombosis, nonpyogenic
I63.8	Other cerebral infarction
I63.9	Cerebral infarction, unspecified

JAWDA Pre-Hospital Emergency Medical Services (EMS) Indicators

Stroke Hemorrhagic:

I60.00	Nontraumatic subarachnoid hemorrhage from unspecified carotid siphon and bifurcation
I60.01	Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation
I60.02	Nontraumatic subarachnoid hemorrhage from left carotid siphon and bifurcation
I60.10	Nontraumatic subarachnoid hemorrhage from unspecified middle cerebral artery
I60.11	Nontraumatic subarachnoid hemorrhage from right middle cerebral artery
I60.12	Nontraumatic subarachnoid hemorrhage from left middle cerebral artery
I60.2	Nontraumatic subarachnoid hemorrhage from anterior communicating artery
I60.30	Nontraumatic subarachnoid hemorrhage from unspecified posterior communicating artery
I60.31	Nontraumatic subarachnoid hemorrhage from right posterior communicating artery
I60.32	Nontraumatic subarachnoid hemorrhage from left posterior communicating artery
I60.4	Nontraumatic subarachnoid hemorrhage from basilar artery
I60.50	Nontraumatic subarachnoid hemorrhage from unspecified vertebral artery
I60.51	Nontraumatic subarachnoid hemorrhage from right vertebral artery
I60.52	Nontraumatic subarachnoid hemorrhage from left vertebral artery
I60.6	Nontraumatic subarachnoid hemorrhage from other intracranial arteries
I60.7	Nontraumatic subarachnoid hemorrhage from unspecified intracranial artery
I60.8	Other nontraumatic subarachnoid hemorrhage
I60.9	Nontraumatic subarachnoid hemorrhage, unspecified
I61.0	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical
I61.1	Nontraumatic intracerebral hemorrhage in hemisphere, cortical
I61.2	Nontraumatic intracerebral hemorrhage in hemisphere, unspecified
I61.3	Nontraumatic intracerebral hemorrhage in brain stem
I61.4	Nontraumatic intracerebral hemorrhage in cerebellum
I61.5	Nontraumatic intracerebral hemorrhage, intraventricular
I61.6	Nontraumatic intracerebral hemorrhage, multiple localized
I61.8	Other nontraumatic intracerebral hemorrhage
I61.9	Non traumatic intracerebral hemorrhage, unspecified

JAWDA Pre-Hospital Emergency Medical Services (EMS) Indicators

Acute Myocardial Infarction

121.0	ST elevation (STEMI) myocardial infarction of anterior wall
121.01	ST elevation (STEMI) myocardial infarction involving left main coronary artery
121.02	ST elevation (STEMI) myocardial infarction involving left anterior descending coronary artery
121.09	ST elevation (STEMI) myocardial infarction involving other coronary artery of anterior wall
121.1	ST elevation (STEMI) myocardial infarction of inferior wall
121.11	ST elevation (STEMI) myocardial infarction involving left circumflex coronary artery
121.19	ST elevation (STEMI) myocardial infarction involving other coronary artery of inferior wall
121.2	ST elevation (STEMI) myocardial infarction of other sites
121.21	ST elevation (STEMI) myocardial infarction involving left circumflex coronary artery
121.29	ST elevation (STEMI) myocardial infarction involving other sites
121.3	ST elevation (STEMI) myocardial infarction of unspecified site
121.9	Acute myocardial infarction, unspecified
121.A	Other type of myocardial infarction
121.A1	Myocardial infarction type 2
121.A9	Other myocardial infarction type

Cardiac Arrest

I46.2	Cardiac arrest due to underlying cardiac condition
I46.8	Cardiac arrest due to other underlying condition
I46.9	Cardiac arrest, cause unspecified