Policy #630.00
Title: Ambulance Patient Offload Time (APOT) and Delay (APOD)

Approved: On-File  Effective Date: 10/2017
EMS Administration: Kathleen Grassi, R.D., MPH

On-File  Revision Date: New Policy
EMS Medical Director: Ajinder Singh, MD CPE

Review Date: 10/2020
Page: 1 of 12

Purpose:

A. To establish policy for the safe and rapid transfer of patient care responsibilities between Emergency Medical Services (EMS) personnel and emergency department (ED) medical personnel.

B. To provide standardized methodologies for Ambulance Patient Offload Time (APOT) data collection and reporting to the California EMS Authority (EMSA) in accordance with AB 1223 (O'Donnell, 2015).

B. To use statewide standard methodology for calculating and reporting APOT developed by The California EMS Authority (EMSA).

C. To establish criteria for the reporting of, and quality assurance follow-up for a non-standard patient offload time.

Authority:

A. California Health and Safety Code, Division 2.5 Sections 1797.120, 1797.225 and 1797.227.

B. AB 1223 (O'Donnell, 2015).

Background:

A. As a result of the passage and gubernatorial signing of AB 1223 (O'Donnell, 2015), Health and Safety Code 1797.120 requires EMSA to develop a standard methodology for calculation of, and reporting by, a Local EMS Agency (LEMSA) of ambulance patient offload time.

B. Health and Safety Code 1797.225 establishes that a LEMSA may adopt policies and procedures for calculating and reporting ambulance offload time. Those policies and procedures must be based on the statewide standard methodology developed pursuant to California Health and Safety Code Section 1797.120. LEMSAs that adopt patient off-loading policies and procedures must also establish criteria for reporting and quality assurance follow-up for a non-standard patient off load time.
Considerations:
Delays in the transfer of patient care and offloading of patients delivered to designated receiving hospitals by EMS ambulance adversely affects patient care, safety and the availability of ambulances for emergency responses throughout Merced County. It is incumbent upon receiving hospitals and ambulance providers alike to minimize the time required to transfer patient care and return ambulances to service to ensure optimal patient care, safety and EMS system integrity. ¹

Definitions:

A. Ambulance arrival at the Emergency Department (ED) - the time ambulance stops at the location outside the hospital ED where the patient will be unloaded from the ambulance.

B. Ambulance Patient Offload Time (APOT) - the time interval between the arrival of an ambulance patient at an ED and the time the patient is transferred to the ED gurney, bed, chair or other acceptable location and the emergency department assumes the responsibility for care of the patient.

C. Ambulance Patient Offload Time (APOT) Standard – the time interval standard established by the Local EMS Agency (LEMSA) within which an ambulance patient that has arrived in an ED should be transferred to an ED gurney, bed, chair or other acceptable location and the ED assumes the responsibility for care of the patient.

D. Non-Standard Patient Offload Time – the ambulance patient offload time for a patient exceeds a period of time designated by the LEMSA. (See Standards below).

E. Ambulance transport – the transport of a patient from the prehospital EMS system by emergency ambulance to an approved EMS receiving hospital. This includes Interfacility transports, 7-digits response, and other patient transports to the ED.

F. APOT 1 – an ambulance patient offload time interval process measure. This metric is a continuous variable measured in minutes and seconds then aggregated and reported at the 90th percentile.

G. APOT 2 - an ambulance patient offload time interval process measure. This metric demonstrates the incidence of ambulance patient offload times that exceed a twenty (20) minute reporting goal reported in reference to sixty (60), one hundred twenty (120) and one hundred eighty (180) minute time intervals, expressed as a percentage of total EMS patient transports.

H. Ambulance Patient Offload Delay (APOD) - the occurrence of a patient remaining on the ambulance gurney and/or the emergency department has not assumed responsibility for patient care beyond the LEMSA approved APOT standard. (Synonymous with non-standard patient offload time).

I. Clock Start – the timestamp that captures when APOT begins. This is captured in the NEMSIS 3.4 data set as the time the patient/ambulance arrives at destination/receiving hospital (eTimes.11) and stops at the location outside the hospital ED where the patient will be unloaded from the ambulance.

J. **Clock Stop** – the timestamp that captures when APOT ends. This is captured in the NEMSIS 3.4 data set as Destination Patient Transfer of Care Date/Time (e.Times.12).

K. **Emergency Department (ED) Medical Personnel** – an ED physician, mid-level practitioner (e.g. Physician Assistant, Nurse Practitioner) or Registered Nurse (RN).

L. **EMS Personnel** – Public Safety First Responders, EMTs, AEMTs, EMT-II and/or paramedics responsible for out of hospital patient care and transport consistent with the scope of practice as authorized by their level of credentialing.

M. **Transfer of Patient Care** – the transition of patient care responsibility from EMS personnel to receiving hospital ED medical personnel. (See criteria below in Measurement Methods).

N. **Verbal Patient Report** – The face-to-face verbal exchange of key patient information between EMS personnel and ED medical personnel and is presumed to indicate transfer of patient care.

O. **Written EMS Report** – The written report supplied to ED medical personnel that details patient assessment and care that was provided by EMS personnel. Electronic Report (ePCR) is now required by California Health and Safety Code 1797.227.

**Standard Offload Time: APOT**

Receiving hospitals have a responsibility to ensure policies and processes are in place that facilitate the rapid and appropriate transfer of patient care from EMS personnel to the ED medical personnel. The ambulance patient offload time performance standard is set at twenty (20) minutes or less 90% of the time measured monthly.

**Non-Standard Offload Time: Extended Delay**

A POD occurs when patient offload time is exceeded. Merced County EMS Agency (MCEMSA) shall collect and report the percentage of patients that are delayed by 21-60 minutes, 61-120 minutes, 121-180 minutes, and delays greater than 180 minutes to EMSA.

**A POD Mitigation Procedures:**

Designated receiving hospitals have a responsibility to ensure policies and processes are in place that facilitates the rapid and appropriate transfer of patient care from EMS field personnel to the ED medical personnel within twenty (20) minutes of arrival at the ED.

ED medical personnel should consider the following to prevent A POD:

- Immediately acknowledge the arrival of each patient transported by EMS;
- Receive a verbal patient report from EMS field personnel; and
- Transfer patient to the hospital gurney, bed, chair, wheelchair or waiting room as appropriate for patient condition within 20 minutes of arrival at the hospital ED.

If A POD occurs the hospital should make every attempt to:
B. Inform the attending paramedic or EMT of the anticipated time for the offload of the patient.

C. Provide information to the supervisor of the EMS field personnel regarding the steps that are being taken by the hospital to resolve APOD.

D. Extended offload times reported during an MCI or other large incident(s) response will be taken into consideration as a potential Exemption Reason.

EMS personnel are directed to do the following to prevent APOD:

A. Provide the receiving hospital ED with the earliest possible notification that the patient is being transported to their facility.

B. Provide a verbal patient report to the ED medical personnel within 20 minutes of arrival to the ED.

C. Contact the EMS Provider’s on-duty supervisor, or other designated contact for direction if the ED medical personnel do not offload the patient within the 20 minute local ambulance patient offload time standard.

D. Obtain a signature from the ED medical personnel as soon as patient care has been transferred.

E. Work cooperatively with the receiving hospital staff to transition patient care within the timeframes established by this policy.

F. EMS personnel are responsible for immediately returning to response ready status once patient care has been transferred to ED medical personnel and the patient has been offloaded from the ambulance gurney.

**Direction of EMS Personnel:**

EMS personnel shall continue to provide patient care prior to the transfer of patient care to the designated receiving hospital ED medical personnel. All patient care shall be documented according to MCEMSA policies. Medical Control and management of the EMS system, including EMS personnel, remain the responsibility of the Local EMS Agency Medical Director and all care provided to the patient must be pursuant to MCEMSA protocols and policies.

**Patient Care Responsibility:**

The responsibility for patient care belongs to the designated receiving hospital once the patient arrives on hospital grounds.² Receiving hospitals should implement processes for ED medical personnel to immediately triage and provide the appropriate emergency medical care for ill or injured patients upon arrival to the ED by ambulance.

**Transfer of Patient Care:**

When patients under the care of EMS personnel arrive at the hospital, the ED medical personnel should make every attempt to accept a verbal patient report and offload the patient to a hospital bed or other suitable sitting or reclining device at the earliest possible time not to exceed 20 minutes. During triage by ED medical personnel, EMS personnel will provide a verbal patient report containing any pertinent information necessary for the ongoing care of the patient. Transfer of patient care is completed once

---

² Emergency Medical Treatment and Active Labor Act (EMTALA), 42 US Code of Federal Regulations
the ED medical staff has accepted a verbal patient report, the patient has been transferred to a hospital bed and a signature has been obtained from medical ED personnel. If transfer of care and patient offloading from the ambulance gurney exceeds the 20 minute standards, it will be documented and tracked as APOD.

**Measurement Methods:**

APOT is defined in statute as a time interval, therefore process controls must be established for collecting the beginning and ending timestamps to be utilized for the calculation of the time interval.

A. **Clock Start (eTimes.11), “Patient Arrived at Destination Date/Time”**
   The time the ambulance arrives at the ED and stops at the location outside the hospital ED where the patient will be unloaded from the ambulance.

B. **Clock Stop (eTimes.12), Destination Patient Transfer of Care Date/Time**
   When the patient is transferred to the emergency department gurney, bed, chair or other acceptable location and the emergency department has assumed the responsibility for care of the patient.

**Transfer of Care Criteria:**

A. Verbal patient report is given by transporting EMS personnel and acknowledged by ED medical personnel.³

B. The patient is moved off of the EMS gurney.

C. ED medical personnel signs e-PCR or other patient care form (Completion of ePCR is not a requirement for Clock Stop). The APOT Clock Stop is documented through a timestamp that is captured as eTimes.12 "Destination Patient Transfer of Care Date/Time" in NEMSIS 3.4.

**Data Collection and Documentation:**

A. **APOT-1:** The number reported is the APOT in minutes/seconds for Transfer of Care of 90% of ambulance patients and the number of ambulance runs included in the report.

B. **APOT-2:** The number reported is the percentage of ambulance patients transported by EMS personnel that experience an ambulance patient offload delay beyond twenty (20) minutes, which has been set as a target standard for statewide reporting consistency and to exclude rapid APOT from being combined with more extended times. Time intervals will be reported by sixty (60) minute intervals up to one hundred eighty (180) minutes then any APOT exceeding one hundred eighty (180) minutes.

**Criteria for Quality Assurance Follow-up**

Triggers for specific quality assurance or quality improvement actions could include but are not limited to:⁴

³ Verbal report must include a structured and complete report with the following information: Chief complaint, initial vital signs, pertinent history and exam findings, interventions and treatment provided in the field, current vital signs and status, laboratory tests (e.g., glucose), and copy of ECG.

• Occurrence of extended APOD, for example, more than one hour (APOT-2);
• Occurrence of APOD with the patient decompensating or worsening in condition;
• Occurrence of APOD with an associated patient complaint;
• Occurrence of APOD with associated delayed ambulance response(s) to other calls in the community, and;
• EMS System performance below the established fractile (e.g. 90%) for compliance to the LEMSA’s APOT standard.
<table>
<thead>
<tr>
<th>MEASURE SET</th>
<th>Ambulance Patient Offload Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>SET MEASURE ID #</td>
<td>APOT-1</td>
</tr>
<tr>
<td>PERFORMANCE MEASURE NAME</td>
<td>Ambulance Patient Offload Time for Emergency Patients</td>
</tr>
<tr>
<td>Description</td>
<td>What is the 90th percentile for Ambulance Patient Offload Time at the Hospital Emergency Department?</td>
</tr>
<tr>
<td>Type of Measure</td>
<td>Process</td>
</tr>
<tr>
<td>Reporting Value and Units</td>
<td>Time (Minutes and Seconds)</td>
</tr>
<tr>
<td>Continuous Variable Statement (Population)</td>
<td>Time (in minutes) from time ambulance arrives at the hospital until the patient is transferred to hospital emergency department care. All 911 emergency ambulance transports to the ED with eTimes available are included.</td>
</tr>
<tr>
<td>Inclusion Criteria</td>
<td>Criteria (NEMSIS 3.4)</td>
</tr>
<tr>
<td>All events for which eResponse.05 “type of service requested” has value recorded of 911 Response (Scene)</td>
<td>• Type of Service Requested (eResponse.05)</td>
</tr>
<tr>
<td>AND</td>
<td>• Type of Destination (eDisposition.21)</td>
</tr>
<tr>
<td>All events in eDisposition.21 “Type of Destination” with the value of 4221003, “Hospital-Emergency Department”;</td>
<td>• Patient Arrived at Destination Date/Time (eTimes.11)</td>
</tr>
<tr>
<td>AND</td>
<td>• Destination Patient Transfer of Care Date/Time (eTimes.12)</td>
</tr>
<tr>
<td>eTimes.11 “Patient Arrived at Destination Date/Time” values are logical and present</td>
<td>(See APOT 2 and Guidance for criteria for eTimes.12)</td>
</tr>
<tr>
<td>AND</td>
<td>• eTimes.12 “Destination Patient Transfer of Care Date/Time” values are logical and present</td>
</tr>
</tbody>
</table>

---

1 Initial year of reporting to EMSA will include only 911, but LEMSA may choose to also monitor APOT for IFT, 7-digit and other transports to the ED

2 It is recommended to configure eTimes.12 “Destination Patient Transfer of Care Date/Time” in NEMSIS 3.4 with a signature block. If a system does not accommodate a signature block or a signature is not obtained for operational reasons, a time stamp on the ePCR based verbal acknowledgement of EMS patient report by ED medical personnel is sufficient.
<table>
<thead>
<tr>
<th>Exclusion Criteria</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator Formula</td>
<td>The formula is the 90th Percentile of the given numbers or distribution in their ascending order.</td>
</tr>
<tr>
<td>Numeric Expression</td>
<td></td>
</tr>
<tr>
<td>Example of Final Reporting Value (number and units)</td>
<td>19 minutes, 34 seconds (19:34)</td>
</tr>
<tr>
<td>Sampling</td>
<td>No</td>
</tr>
<tr>
<td>Aggregation</td>
<td>Yes</td>
</tr>
<tr>
<td>Minimum Data Values</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Data Collection Approach</td>
<td>Retrospective data sources for required data elements include administrative data and pre-hospital care records. Variation may exist in the assignment of coding; therefore, coding practices may require evaluation to ensure consistency.</td>
</tr>
<tr>
<td>Suggested Display Format &amp; Frequency</td>
<td>Process control or run chart by month</td>
</tr>
<tr>
<td>Suggested Statistical Measures</td>
<td>90th Percentile Measurement. Aggregate measure of central tendency and quantile (fractile) measurement to determine the span of frequency distributions.</td>
</tr>
<tr>
<td>Trending Analysis</td>
<td>Yes</td>
</tr>
<tr>
<td>Benchmark Analysis</td>
<td>(TBD)</td>
</tr>
</tbody>
</table>
| Reporting Notes | Report aggregate values by:  
  1) LEMSA  
  2) Individual hospital  
  
  Report the 90 percentile time calculated and the denominator (number of 911 transports to emergency department with time stamp data available)  
  
  Report Quarterly, within 2 months of the end of the quarter:  
  - June 1 for period of January 1 through March 31;  
  - September 1 for period of April 1 through June 30;  
  - December 1 for period of July 1 through September 30;  
  - March 1 for period of October 1 through December 31 |
### AMBULANCE PATIENT OFFLOAD TIME—APOT-2 SPECIFICATIONS
Approved by EMS Commission 12-14-16 (Rev 11-17-2016)

<table>
<thead>
<tr>
<th>MEASURE SET</th>
<th>Extended Ambulance Patient Offload Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>SET MEASURE ID #</td>
<td>APOT-2</td>
</tr>
<tr>
<td>PERFORMANCE MEASURE NAME</td>
<td>Duration of Ambulance Patient Offload Time for Patients transported to the Emergency Department by 911 response emergency ambulance¹</td>
</tr>
</tbody>
</table>

#### Description

- 2.1: What percentage of patients transported by EMS personnel experience a transfer of care within 20 minutes of arrival at the Hospital Emergency Department?

- 2.2: What percentage of patients transported by EMS personnel experience a transfer of care between 21 - 60 minutes of arrival at the Hospital Emergency Department?

- 2.3: What percentage of patients transported by EMS personnel experience a transfer of care between 61 - 120 minutes after arrival at the Hospital Emergency Department?

- 2.4: What percentage of patients transported by EMS personnel experience a transfer of care between 121 - 180 minutes after arrival at the Hospital Emergency Department?

- 2.5: What percent of patients transported by EMS personnel experience a transfer of care greater than 180 minutes after arrival at the Hospital Emergency Department?

#### Type of Measure
Process

#### Reporting Value and Units
(%)
Percentage

#### Denominator Statement (population)
Number of patients who were transported to a hospital emergency department by EMS Personnel. Include only 911 response transports with eTimes.11 and eTimes.12 available.

#### Denominator Inclusion Criteria

- All events for which eResponse.05 “Type of Service Requested” has value recorded of 911 Response (Scene);
- eDisposition.21 “Type of Destination” has value of 4221003, “Hospital-Emergency Department”;

#### Criteria (NEMSIS 3.4)

- Type of Service Requested (eResponse.05)
- Type of Destination (eDisposition.21)
- Patient Arrived at Destination Date/Time (eTimes.11)
- Destination Patient Transfer of Care Date/Time (eTimes.12)

---

¹ The first year of reporting to EMSA will focus on 911 response units; however, LEMSAs may choose to also monitor IFT, 7-digit and other transports to the ED.
2.1: What percentage of patients transported by EMS personnel experience a transfer of care within 20 minutes of arrival at the Hospital Emergency Department?

2.2: Number of patients who were transported to a hospital emergency department by EMS Personnel and had their care transferred within 20 - 60 minutes after their arrival to the Emergency Department.

2.3: Number of patients who were transported to a hospital emergency department by EMS Personnel and had their care transferred 61-120 minutes after their arrival to the Emergency Department.

2.4: Number of patients who were transported to a hospital emergency department by EMS Personnel and had their care transferred within 20 - 60 minutes after their arrival to the Emergency Department.

2 It is recommended to configure ePCR programs so that the signature block timestamp is collected as eTimes.12 “Destination Patient Transfer of Care Date/Time” in NEMSIS 3.4. If a system does not accommodate a signature block or a signature is not obtained for operational reasons, a time stamp on the ePCR based verbal acknowledgement of EMS patient report by ED medical personnel is sufficient.

3 Transfer to hospital care and end of APOT interval should include the following:

- Verbal patient report is given by transporting EMS personnel and acknowledged by ED medical personnel
- Patient is transferred off the EMS gurney
- Clock stop is documented through a timestamp that is captured as eTimes.12 in NEMSIS 3
Personnel and had their care transferred 121 - 180 minutes after their arrival to the Emergency Department.

2.5: Number of patients transported by EMS personnel that experience a transfer of care greater than 180 minutes after arrival at the Hospital Emergency Department.

<table>
<thead>
<tr>
<th>Numerator Inclusion Criteria</th>
<th>Criteria</th>
<th>Data Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All events for which eResponse.05 “type of service requested” has value recorded of “911 response (Scene)”; AND eTimes.12 “Destination Patient Transfer of Care Date/Time” values are logical and present</td>
<td>• Type of Service Requested (eResponse.05) • Type of Destination (eDisposition.21) • Patient Arrived at Destination Date/Time (eTimes.11) • Destination Patient Transfer of Care Date/Time (eTimes.12)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exclusion Criteria</th>
<th>Criteria</th>
<th>Data Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

**Indicator Formula Numeric Expression**

The formula is to divide (/) the numerator (N) by the denominator (D) and then multiply (x) by 100 to obtain the (%) value the indicator is to report. Therefore the indicator expressed numerically is N/D =%

**Example of Final Reporting Value (number and units)**

15%

**Sampling**

No
<table>
<thead>
<tr>
<th>Aggregation</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Data Values</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
| Data Collection Approach | - Retrospective data sources for required data elements include administrative data and pre-hospital care records.  
- Variation may exist in the assignment of coding; therefore, coding practices may require evaluation to ensure consistency. |
| Suggested Display Format & Frequency | Process control or run chart by month |
| Suggested Statistical Measures | Mean (x); Mode (m) |
| Trending Analysis | Yes |
| Reporting Notes | Report aggregate values by:  
1) LEMSA  
2) Individual hospital  
Report the % calculated and the denominator used to calculate (number of 911 transports with time stamp data available)  
Report Quarterly, within 2 months of the end of the quarter:  
- June 1 for period of January 1 through March 31;  
- September 1 for period of April 1 through June 30;  
- December 1 for period of July 1 through September 30;  
- March 1 for period of October 1 through December 31 |