Ambulance Patient Offload Time Special Seasonal Report



Week 18 (04/27/25 - 05/03/25)

Riverside County EMS System Status							
Week 18 Summary							
9-1-1 Responses	\rightarrow	4,898 9-1-1 responses — 2.5% DECREASE from the previous week - Pg 3					
9-1-1 Transports within Riverside County	\leftrightarrow	3,535 9-1-1 transports — 0.2% INCREASE from the previous week - Pg 3					
Ambulance Patient Offload Delay (APOD)	↑	690 Ambulance Patient Offload Delays — 20.8% INCREASE from the previous week - Pg 3					
APOD Hours	↑	304.1 Ambulance Patient Offload delay hours –48.9% INCREASE from the previous week - Pg 4					
APOD Compliance	\	80.5% APOD Compliance —4.0% DECREASE from the previous week - Pg 2					
Ambulance Patient Offload Time (APOT) >90 min	↑	89 transports with APOT >90 min — 89.4% INCREASE from the previous week - Pg 5					
Emergency Treatment Services	↑	75 ETS transports —12% INCREASE from the previous week — 100% OFFLOAD < 30 min - Pg 6					
ILI Responses	↑	Influenza related illness (ILI) BELOW 2 Standard Deviations from BASELINE -Pg 8					

This report and all published County EMS system reports can be found at: http://www.rivcoready.org/remsa/data-and-reports/current-reports

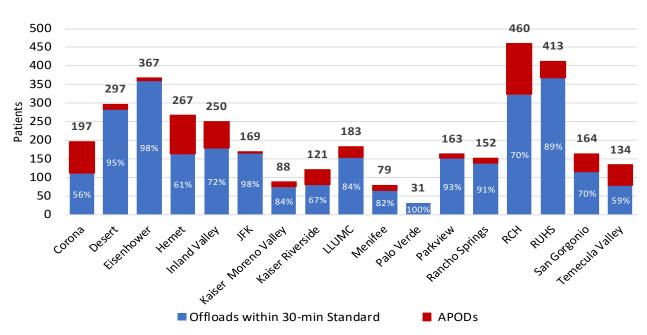
RIVERSIDE COUNTY EMS SYSTEM - SPECIAL SEASONAL REPORT

In an effort to monitor Ambulance Patient Offload Time (APOT) and influencing factors such as seasonal surge, Riverside County EMS Agency is publishing weekly reports. The following graphs and charts represent weekly aggregates of 9-1-1 Responses, Transports, and Ambulance Patient Offload Delays (APOD) across Riverside County. (For more details on methods and definitions, reference the end of this report)

TRANSPORT & AMBULANCE PATIENT OFFLOAD TIME BY HOSPITAL

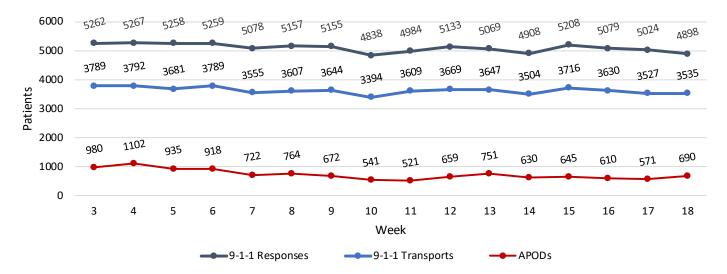
2025 WEEK 18						
	911				APOD	
	Transports	APOT	APOD Hours	APODs	Compliance	
Corona Regional Med Ctr	197	123:39:20	45:59:32	86	56.3%	
Desert Regional Med Ctr	297	70:00:22	4:35:57	14	95.3%	
Eisenhower Health	367	72:15:25	0:48:15	6	98.4%	
Hemet Valley Hospital	267	152:02:03	41:18:10	103	61.4%	
Inland Valley Med Ctr	250	131:19:31	50:16:35	71	71.6%	
JFK Hospital	169	27:52:16	1:02:32	3	98.2%	
Kaiser Hospital Moreno Valley	88	33:01:10	5:46:18	14	84.1%	
Kaiser Hospital Riverside	121	57:47:01	14:00:04	40	66.9%	
Loma Linda Univ Med Ctr Mur	183	77:14:00	13:21:45	29	84.2%	
Menifee Med Ctr	79	33:52:27	6:32:06	14	82.3%	
Palo Verde Hospital	31	3:46:29	0:00:00	0	100.0%	
Parkview Community Hospital	163	45:52:26	1:44:17	11	93.3%	
Rancho Springs Med Ctr	152	46:50:14	4:16:25	13	91.4%	
Riverside Community Hospital	460	227:57:07	69:06:30	137	70.2%	
Riverside University Health System	413	131:36:05	4:29:20	45	89.1%	
San Gorgonio Mem Hospital	164	79:08:56	15:12:16	49	70.1%	
Temecula Valley Hospital	134	78:51:58	25:34:38	55	59.0%	
Totals	3,535	1393:06:50	304:04:40	690	80.5%	

Transports and APOD Compliance by Hospital



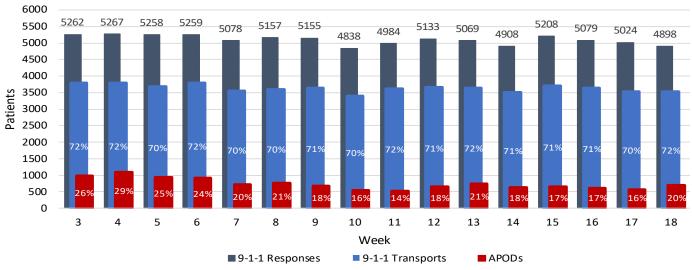
RESPONSES*, TRANSPORTS**, AND APOD OVER TIME

Weekly Transports and APODs 2025 Week 03 through Week 18



*Responses include only 9-1-1 ambulance transport unit responses. In Week 16 of 2025, the 911 response count query was updated to exclude a subset of fire and non-emergency response records that had been included since approximately August 2024, due to changes in agency unit numbers and NEMSIS 3.5 disposition mapping. This change only applies to response counts and the percentage of total transported - not transport counts or their respective compliance percentages. This update has been applied retroactively to correct previous response counts, so there may be a discrepancy noted in the count of responses in this, and subsequent reports compared to previous reports since August of 2024.

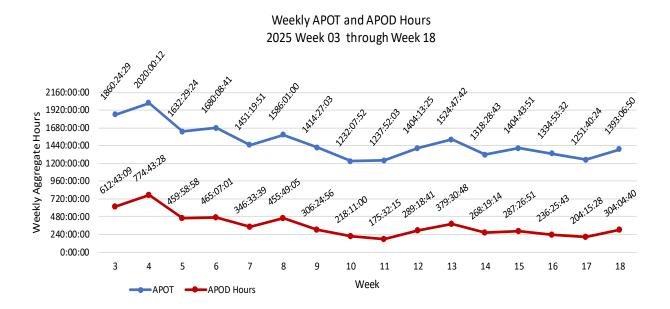
Weekly Transports and APODs 2025 Week 03 through Week 18



^{**}Transport counts in this report include only 9-1-1 ambulance transports originating in Riverside County and transported to hospitals within Riverside County. A small number of 9-1-1 transports are sent to surrounding county hospitals or come into the County from surrounding county 9-1-1 systems.

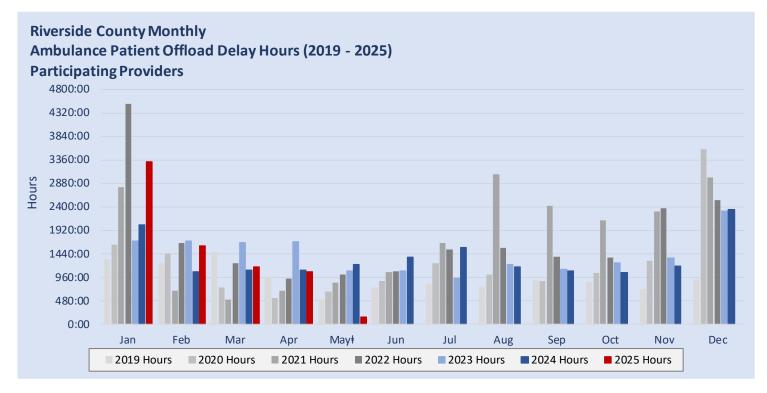
- During Week 18, there were a total of **4,898 emergency ambulance responses** in Riverside County—2.5% DECREASE from the previous week's total of 5,024 responses.
- During Week 18, there were a total of 3,535 emergency ambulance transports in Riverside County— 0.2%
 DECREASE from the previous week's 3,527 transports.
- During Week 18, there were a total of 690 Ambulance Patient Offload Delays (APODs) in Riverside County— 20.8%
 INCREASE from the previous week's total of 571 APODs.

The following chart represents weekly aggregate Ambulance Patient Offload Time (APOT) and Delay (APOD) hours (hh:mm:ss) for the past 16 weeks. APOT begins at patient arrival at hospital (eTimes.11) and ends when patient care is transferred to the hospital (eTimes.12). APOD calculation begins when APOT exceeds the 30-minute transfer of care standard defined in REMSA Policy 4109.



- During Week 18, APOT county-wide totaled 1393.1 hours —11.3% INCREASE from the previous week's total of 1251.7 hours.
- County-wide APOD hours for Week 18 totaled 304.1 hours, a 48.9% INCREASE from the previous week's total of 204.3 hours.

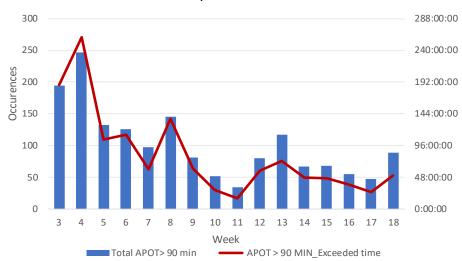
The data provided below illustrates the total APOD time (hh:mm) by month over the last five years. This chart is a summation of offload time delays only and excludes the initial 30-minute period defined as the standard transfer of care time.



AMBULANCE REDIRECTION

REMSA <u>Policy</u> 6104 allows redirection of ambulances away from hospitals experiencing significant Ambulance Patient Offload Delays (APOD) to the next most appropriate facility. *Significant* APOD is defined as a patient remaining on an ambulance gurney for **90 minutes or greater after arrival at the hospital** (APOT > 90 min). Standard transfer of care is 30 minutes or less (APOT<30 min). Until the transfer of care is complete (patient is removed from the gurney and hospital staff assume care of the patient), ambulance crews must remain at the hospital and continue care. While patients held on excessive APODs are generally those classified as lower acuity, approximately one-third of the County's ~600 daily 9-1-1 medical responses are determined by dispatch as critical, requiring immediate medical attention (e.g., cardiac arrest, stroke, traumatic injury). As a result, excessive, or multiple APODs within the same service area impact ambulance timeliness and availability in the field posing direct risk to 9-1-1 patient safety. Ambulance redirection is one strategy to reduce the consequential backlog of EMS services which occurs when there are excessive ambulance delays at hospital emergency departments. Below is the Week 18countywide breakdown of APOD occurrences where ambulances were documented as held for greater than 90 minutes before transfer of care.





During Week 18, 89 ambulances were delayed greater than 90 minutes — 89.4% INCREASE from the previous week's total of 47.

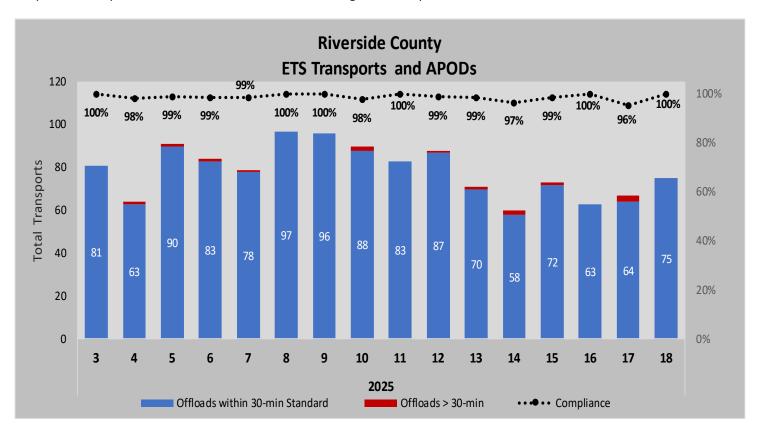
	Total Time					
	APOT>90 min	Total Incidents				
Facility	(HR: MM: S)	APOT>90 min				
Corona Regional Med Ctr	8:20:52	18				
Desert Regional Med Ctr	0:54:04	1				
Eisenhower Health	0:00:00	0				
Hemet Valley Hospital	6:24:02	9				
Inland Valley Med Ctr	15:16:31	15				
JFK Hospital	0:00:00	0				
Kaiser Hospital Moreno Valley	0:23:14	1				
Kaiser Hospital Riverside	0:30:32	3				
Loma Linda Univ Med Ctr Mur	2:06:10	5				
Menifee Med Ctr	0:53:11	2				
Palo Verde Hospital	0:00:00	0				
Parkview Community Hospital	0:00:00	0				
Rancho Springs Med Ctr	0:00:00	0				
Riverside Community Hospital	11:46:37	26				
Riverside University Health System	0:00:00	0				
San Gorgonio Mem Hospital	1:11:19	2				
Temecula Valley Hospital	3:26:13	7				
Grand Total	51:12:45	89				

EMERGENCY TREATMENT SERVICES

Transport to Emergency Treatment Services (ETS) comprises over 3% of overall transport. This is significant enough to impact the EMS system and, therefore, warrants reporting. However, transport to ETS does not meet the EMSA definitions for APOT (see page 10); therefore, they are not included with the previous APOT aggregates.

ETS Snapshot- 2025 Week 18							
	Transports to ETS	Total Offload Time	APOD Hours HH:MM:SS	Offload >30min	Compliance		
Emergency Treatment Services	75	17:31:39		0	100.0%		

The chart below represents Riverside County's total number of *ETS ambulance transports, patient offload delay (APOD), and percent compliance* for the current week and a rolling 15 weeks prior.

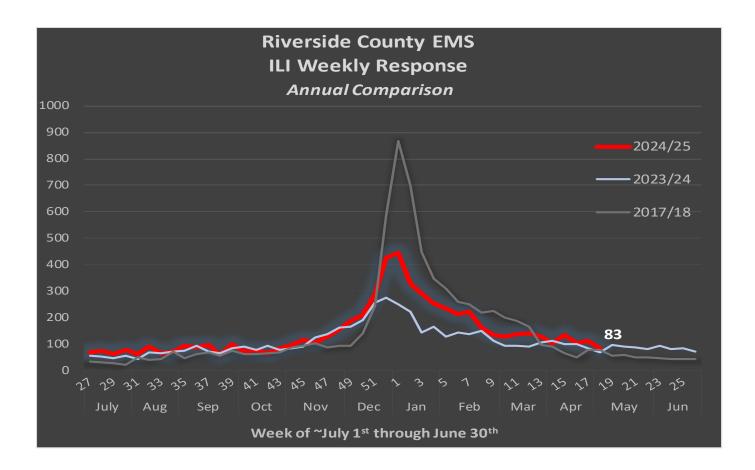


- During Week 18, there was a total of 75 transports to ETS 12% INCREASE from the previous week.
- During Week 18, 100% resulted in offload < 30 minutes.

ILI - INFLUENZA-LIKE ILLNESS RESPONSE

While influenza is detected year-round, it occurs most commonly during fall and winter seasons. Increases in influenza-like-illness (ILI) generally begin in October and peak between December and February. (For more information see https://www.cdc.gov/flu/about/season.html).

Hospital Emergency Departments (EDs) generally experience an increase in volume during flu season which, in turn, can impact Ambulance Patient Offload Time and Delays (APOT/APOD). During the 2017/18 flu season, Riverside County experienced a significant surge related to Influenza-like Illness responses which temporarily but significantly impacted availability of 911 medical services throughout the County. The purpose of the Riverside County EMS system ILI reporting is to improve tracking of influenza-related activity and facilitate EMS preparedness in the event of a significant surge event, similar or greater than that observed during the 2017-18 flu season.



Week 40 (~October 1st) is defined by the Center for Disease Control (CDC) as the expected start of increasing influenza activity, or "flu season". Riverside County EMS Agency monitors influenza-like illness (ILI) year-round for better detection of seasonal or abnormal surges which can impact EMS utilization.

The ILI trigger evaluates electronic patient report (ePCR) data using the following methodology*:

- 1. Filters primary or secondary impression of "Cold/Flu Symptom" (current NEMSIS/ICD-10 value = J00)

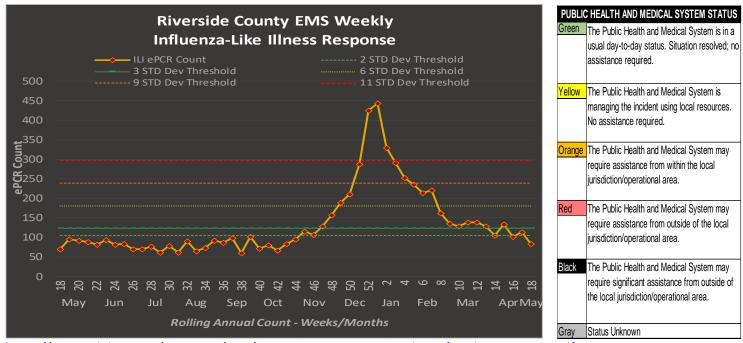
 AND
- 2. Responses involved only with Transporting units (current NEMSIS value = eResponse.14) AND
- 3. Response type of service requested (current NEMSIS value =eReponse.05) as 9-1-1 Response

^{*}ILI methodology modified in 2024/25 season to optimize ILI detection using EMS provider impression and documentation only, further reducing false positive rates.

ILI - INFLUENZA-LIKE ILLNESS RESPONSE (CONT.)

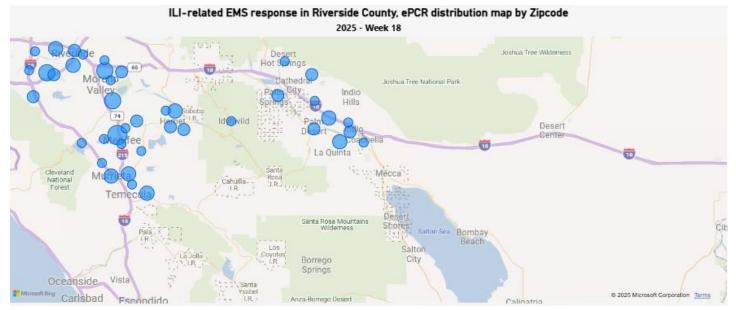
The threshold values listed in the graph below are based on averages across previous years' non-peak flu seasons (averages across weeks 13-38 for the following years: 2019, 2022-2024; 2020 and 2021 are removed due to unusual ILI patterns observed during the Covid-19 pandemic).

EMS ILI response three standard deviations above the calculated baseline average during non-peak flu seasons is recognized as the first level of increase in flu activity. Surges are identified when actual volume surpasses those thresholds and are defined as color levels adapted from the CDPH Standards and Guidelines for Healthcare Surge During Emergencies (actual response status for the EMS system may differ):



https://www.cdph.ca.gov/Programs/EPO/CDPH%20Document%20Library/FinalEOM712011.pdf

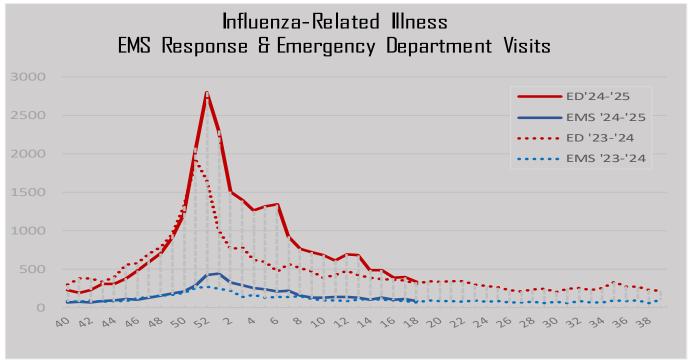
During Week 18, EMS ILI response is BELOW the TWO (2) standard deviation threshold compared to ILI activity during non-peak flu season levels (weeks 13-38).



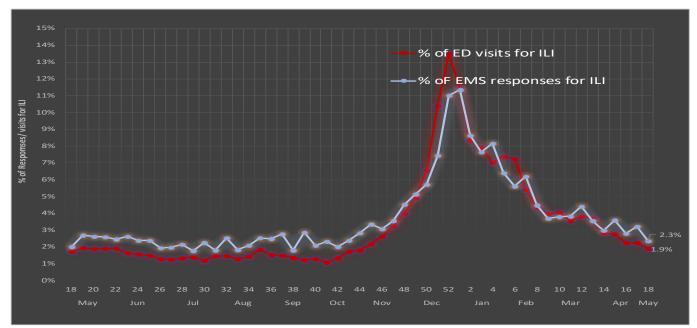
ILI-related EMS response in Riverside County, ePCR distribution map: Week 18

RIVERSIDE COUNTY PUBLIC HEALTH INFLUENZA-LIKE ILLNESS DATA

Riverside County Public Health Department – DOPH collects Emergency Department ILI activity data from the Center for Disease Control's (CDC) *Early Notification of Community-based Epidemics (ESSENCE)* system as part of the National Syndromic Surveillance Program (NSSP). Sixteen of 17 Riverside County hospitals participate in ESSENCE. The graph below provides a comparison between Riverside County's EMS ILI responses and Emergency Department (ED) ILI visits for the current year compared to the previous year.



Starting Week-44 2023, Loma Linda Medical Center's data is added to ED volume.



EMS ILI responses and ED ILI visits as a percentage of their respective total volume – adapted from CDC methodology. Note: EMS percent calculation modified for 2024/25 season. EMS % is now based on transport (ambulance) provider calls only to better represent patient count. In Riverside Co., generally ambulance and fire units arrive on a 911 scene and create separate patient records. For Riverside County Public Health Department Influenza Reporting, see https://www.rivco-diseasecontrol.org/

APOT AND APOD DEFINITIONS

9-1-1 Ambulance Response

For the purpose of reporting valid, unduplicated response counts, only ground transport units responding to 9-1-1 incidents are included in this report. This excludes records from First Responder Fire Agencies arriving on scene with transport agencies as part of Riverside County's 9-1-1 dual medical response system. It also excludes non-emergency interfacility or other transport types (i.e., air ambulance) where a 30-minute time standard would not apply.

Ambulance Patient Offload Time (APOT)

The time interval between the arrival of a 9-1-1 patient at an Emergency Department (ED) and the time that patient is transferred from the ambulance gurney to a bed, chair, or other acceptable location, and the ED assumes responsibility of care. The Clock Start (eTimes.11) is the time of patient arrival at the destination (hospital), and the Clock Stop (eTimes.12) is the time patient care is transferred. REMSA obtains both times from the Electronic Patient Care Report (ePCR).

Ambulance Patient Offload Delay (APOD)

Any delay in ambulance patient offload time (APOT) that exceeds the local ambulance patient offload time standard (Riverside County EMS Agency applies a 30-minute standard). This shall also be synonymous with "non-standard patient offload time" as referenced in the Health and Safety Code.³ If the transfer of care and patient offload from the ambulance gurney exceeds the 30-minute standard, it will be documented and tracked as "APOD".⁴ The Riverside County ePCR system requires medics to enter an "APOD Reason" when APOT exceeds the 30-minute standard. While the number of APODs documented as non-ED-related is nominal, beginning in Week-1 of 2022, only delays identified as having an ED origin are counted against APOD compliance for a more precise metric.

APOD Compliance

Frequency comparison expressed in percentage between the total number of transports and those resulting in APODs having a documented ED-related origin.

Emergency Treatment Services (ETS) Ambulance Patient Offload Delay (APOD)

Transport to ETS maintains the 30-minute offload standard, however, ETS APOD includes 9-1-1 and interfacility transports (IFTs) as approximately three-quarters of ETS transports are IFTs from other medical facilitates.

Additional Data Definitions

Data in this report has been collected from ePCRs (electronic patient care reports) from FirstWatch® and are available after they have been completed by the provider. There is, therefore, an inherent latency to the availability of these records. Due to this latency, subsequent reports may feature slightly different aggregate numbers than earlier reports for the same reporting period. The difference is insignificant (averaging less than .1%) and does not impact overall compliance.

Data in this report includes all transports to the 17 hospitals monitored by REMSA in the respective week relative to the date and time the incident originates (eTimes.03--Dispatch Notified Date/Time). For example, if an incident originates on day-7 of the current reporting week, and the patient is subsequently transferred to the care of an emergency department after midnight which falls on day-1 of the subsequent week, that incident will be included in the current reporting week.

- -For inquiries, please contact Riverside County Emergency Management Department (EMD), EMS Agency (951) 358-5029
- -Current report prepared by Sudha Mahesh & Catherine Borna Farrokhi, EMD, EMS Agency
- ¹ Health and Safety Code Division 2.5, Chapter 3, Article 1, Section 1797.120(b)
- ² Ambulance Patient Offload Time (APOT) Standardized Methods for Data Collection and Reporting, approved by EMS Commission 12/14/2016. https://emsa.ca.gov/wp-content/uploads/sites/71/2017/09/APOT-Methodology_Guidance-2016.pdf
- ³ Ibid., APOT-1 Specifications
- ⁴ <u>REMSA Policy 4109</u>, Transfer of Patient Care
- ⁷ Calkins MM, Isaksen TB, Stubbs BA, Yost MG, Fenske RA (2016). Impacts of extreme heat on emergency medical service calls in King County, Washington, 2007-2012:relative risk and time series analyses of basic and advanced life support. Environ Health. doi: 10.1186/s12940-016-0109-0
- 8 Sheridan SC, Kalkstein AM, Kalkstein LS (2009). Trends in heat-related mortality in the United States, 1975–2004. Natural Hazards 50:1, 145-160
- ⁹ Guo Y, Gasparrini A, Armstrong BG (2017). Heat Wave and Mortality: A Multicountry, Multicommunity Study. Environ Health Perspect. 2017;125(8):087006. doi:10.1289/EHP1026
- ¹⁰ CDC, Climate and Health Program. 2010. https://www.cdc.gov/climateandhealth/effects/default.htm