



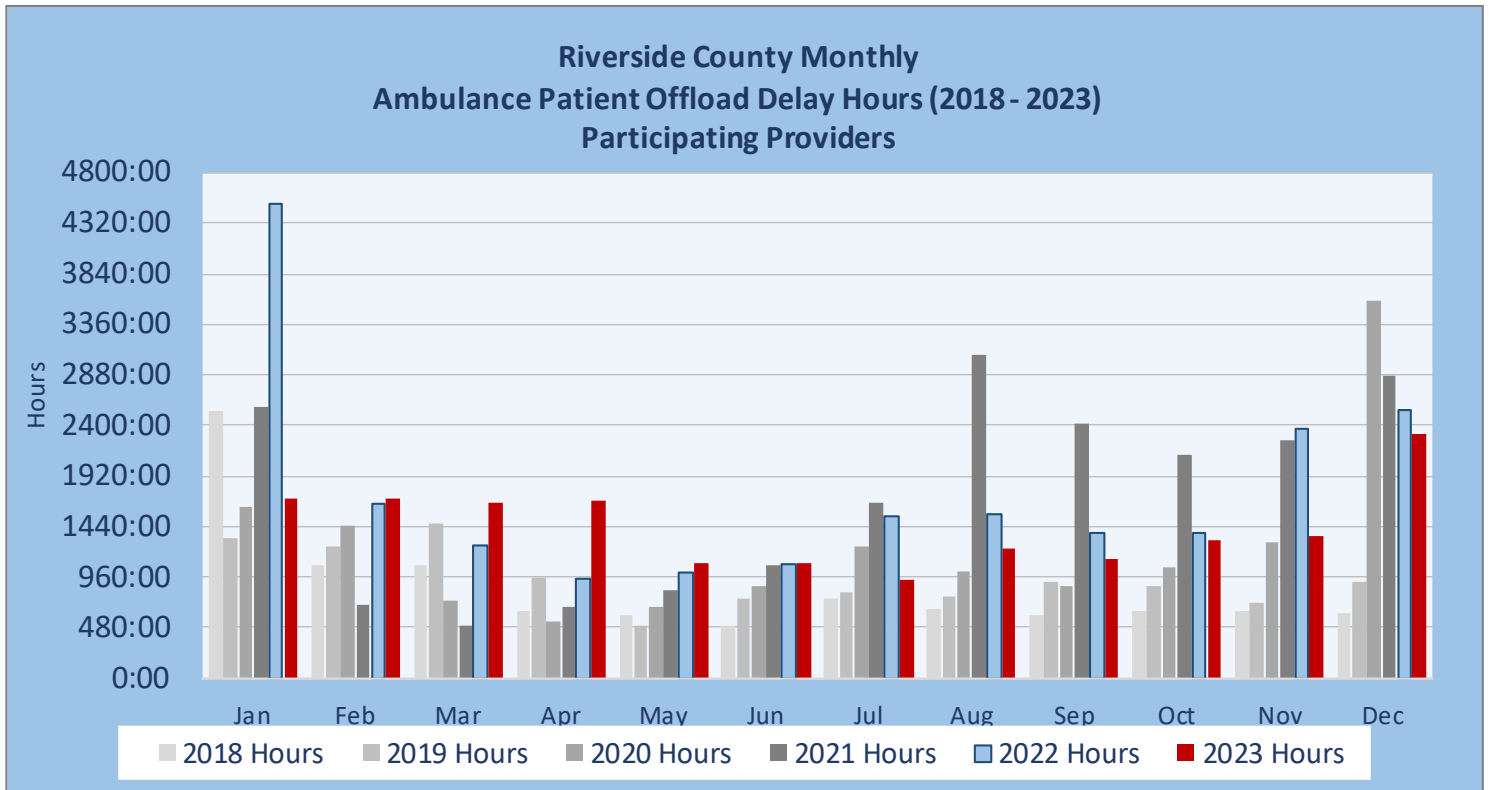
Ambulance Patient Offload Time

December 2023

*Monthly
Report*

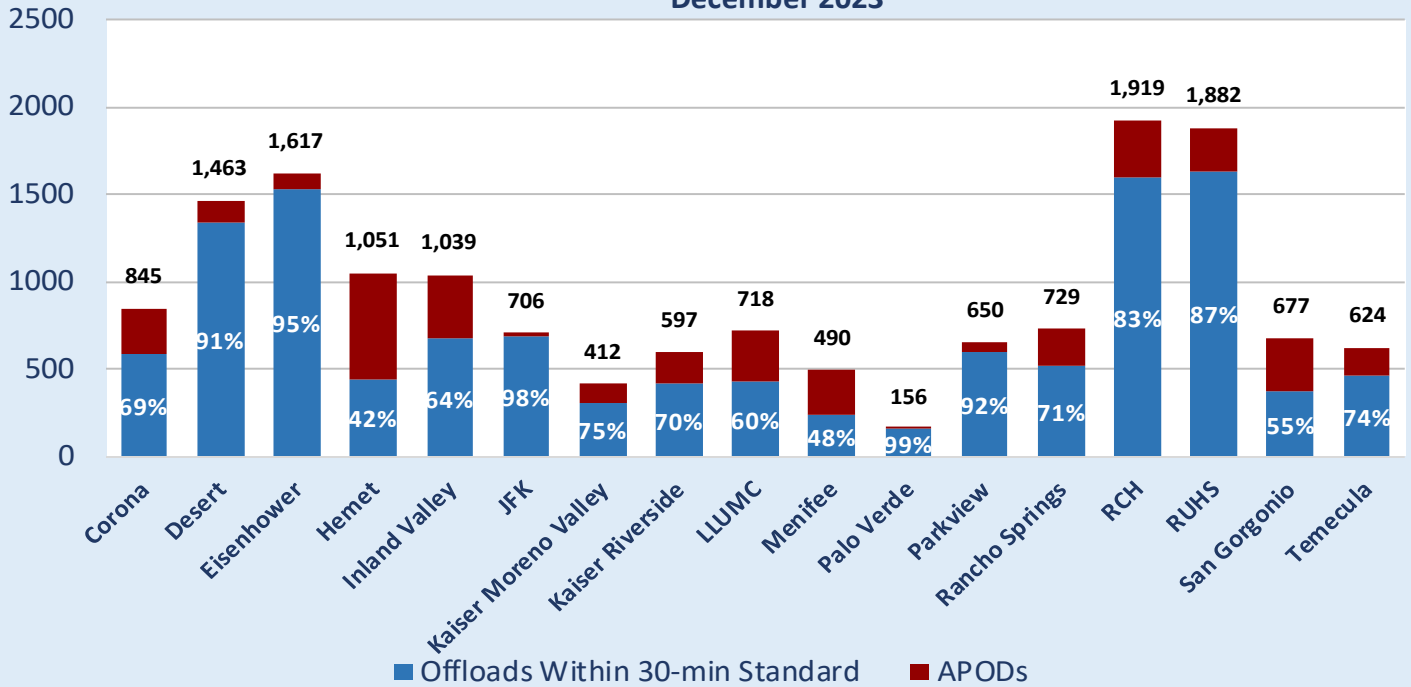
RIVERSIDE COUNTY AMBULANCE PATIENT OFFLOAD TIME

These charts represent total ambulance patient offload times (APOT) and delays (APOD) from hospitals within Riverside County. APOD includes delays greater than 30 minutes and only the time after the first 30 minutes have passed.

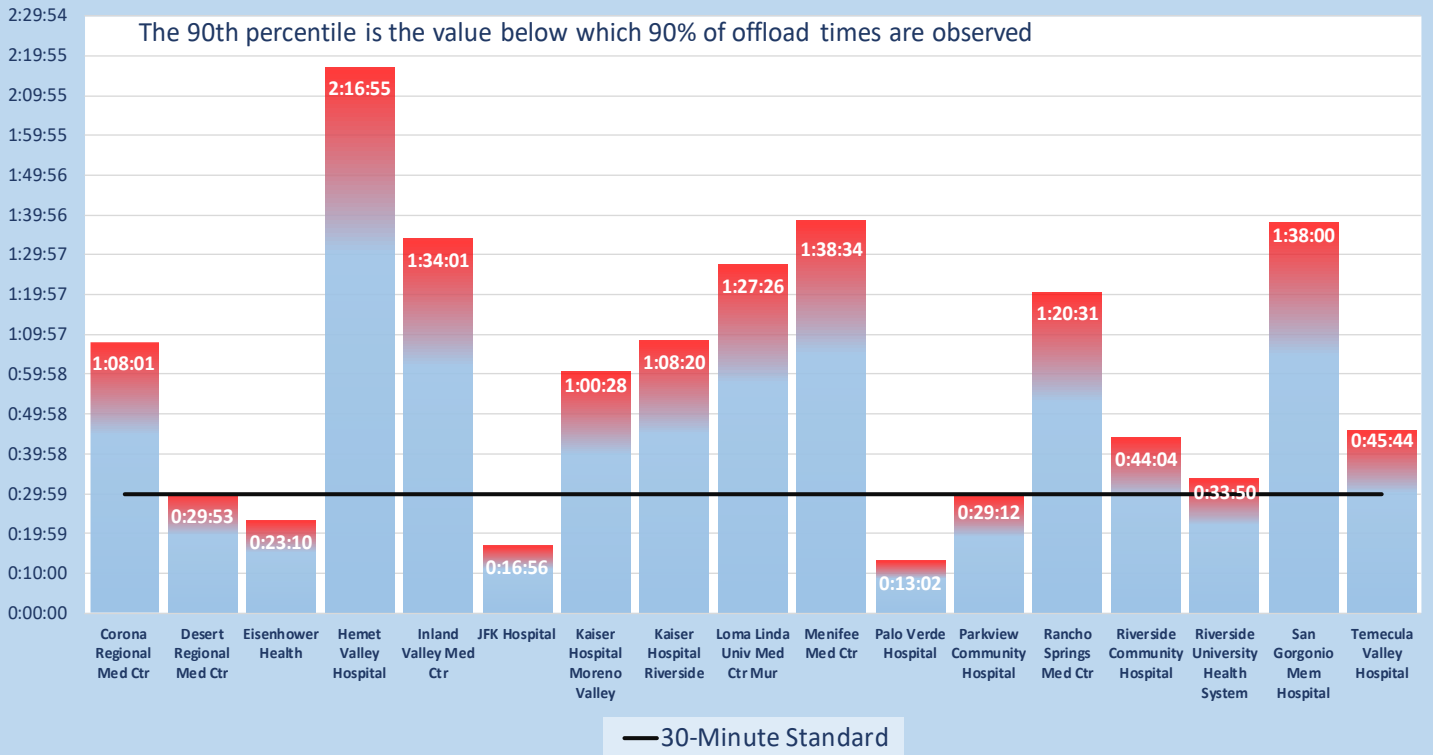


December 2023						
	ALS Transports	APOT	APOD Hours	APODs	APOD Compliance	APOT - 1
Corona Regional Med Ctr	845	442:10:23	142:31:16	258	69.5%	1:08:01
Desert Regional Med Ctr	1,463	406:08:47	44:13:04	129	91.2%	0:29:53
Eisenhower Health	1,617	365:22:21	16:05:59	84	94.8%	0:23:10
Hemet Valley Hospital	1,051	1064:55:17	592:46:37	607	42.2%	2:16:55
Inland Valley Med Ctr	1,039	700:48:14	336:47:00	369	64.5%	1:34:01
JFK Hospital	706	108:00:58	6:43:17	15	97.9%	0:16:56
Kaiser Hospital Moreno Valley	412	189:16:09	52:17:29	103	75.0%	1:00:28
Kaiser Hospital Riverside	597	321:57:47	113:14:06	181	69.7%	1:08:20
Loma Linda Univ Med Ctr Mur	718	512:02:04	218:12:01	288	59.9%	1:27:26
Menifee Med Ctr	490	377:52:00	167:59:19	254	48.2%	1:38:34
Palo Verde Hospital	156	19:05:16	0:10:47	1	99.4%	0:13:02
Parkview Community Hospital	650	199:10:07	13:10:54	54	91.7%	0:29:12
Rancho Springs Med Ctr	729	428:05:57	162:33:44	208	71.5%	1:20:31
Riverside Community Hospital	1,919	719:43:10	150:57:33	328	82.9%	0:44:04
Riverside University Health System	1,882	638:27:33	38:31:36	250	86.7%	0:33:50
San Geronio Mem Hospital	677	507:31:03	220:08:05	306	54.8%	1:38:00
Temecula Valley Hospital	624	274:01:53	47:32:44	160	74.4%	0:45:44
Grand Total	15,575	7274:38:59	2323:55:31	3595	76.9%	0:56:43

Riverside County Hospitals Transports, APODs and % Compliance December 2023



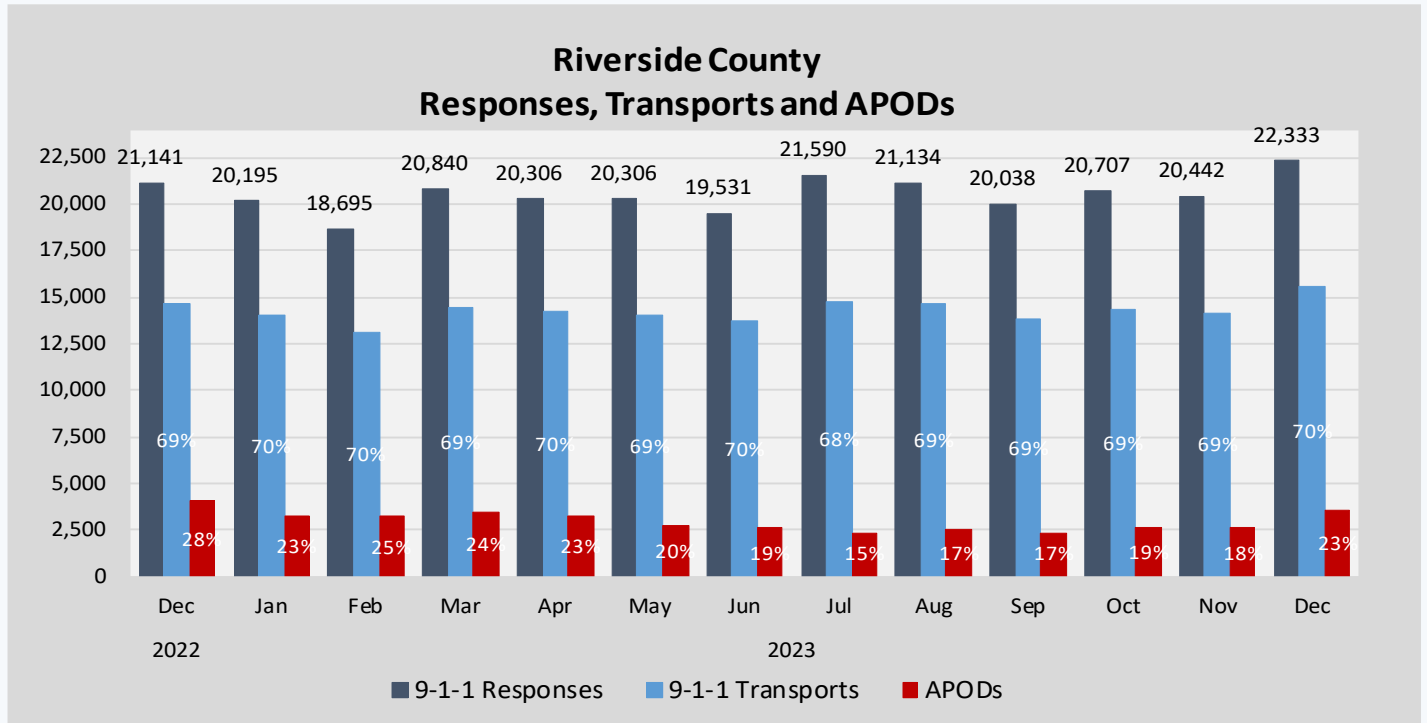
Riverside County Hospitals APOT-1, 90th Percentile December 2023



Data for this report has been collected from ePCRs (electronic patient care records) via 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 higher aggregate numbers than earlier reports for the same reporting period. The difference is insignificant (averaging less than .07%) and does not impact overall compliance.

APOT AND APOD TRENDS: ROLLING ANNUAL REVIEW

The first chart represents a summary of Riverside County’s total 9-1-1 ambulance (ALS) responses, transports, and total transports resulting in patient offload delay (APOD) for a rolling 12 months compared to the current month.



TRANSPORT VOLUME. Transport volume for each hospital over a 12 month period compared to the current month is described below. Each hospital can be categorized as a low to high volume facility relative to all facilities in the county. Hospitals are color coded ranging from low to high based on an average transports of the last 12 months.

Hospital	Transport Volume												2023 Dec	Monthly Avg
	2022 Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov		
Corona Regional Med Ctr	829	804	733	802	783	783	782	911	896	785	812	779	845	811
Desert Regional Med Ctr	1402	1378	1308	1403	1360	1364	1254	1369	1273	1199	1239	1292	1463	1,331
Eisenhower Health	1455	1381	1288	1474	1371	1316	1338	1365	1388	1423	1390	1473	1617	1,406
Hemet Valley Hospital	879	1072	998	1206	1206	1245	1167	1346	1330	1207	1146	1157	1051	1,155
Inland Valley Med Ctr	1069	986	877	952	995	977	926	1034	998	955	990	952	1039	981
JFK Hospital	765	752	690	759	837	705	728	749	731	651	805	717	706	738
Kaiser Hospital Moreno Valley	380	366	374	383	348	376	349	351	375	319	339	365	412	364
Kaiser Hospital Riverside	595	582	491	561	567	572	530	557	585	552	551	603	597	565
Loma Linda Univ Med Ctr Mur	901	828	782	849	852	826	776	788	810	786	818	728	718	805
Menifee Med Ctr	390	320	288	323	307	270	303	301	297	332	345	360	490	333
Palo Verde Hospital	167	137	142	130	136	154	140	164	163	131	164	145	156	148
Parkview Community Hospital	760	696	695	790	704	643	612	655	608	587	595	585	650	660
Rancho Springs Med Ctr	597	488	497	555	513	477	466	529	560	540	571	589	729	547
Riverside Comm Hospital	1468	1501	1347	1517	1515	1626	1650	1844	1798	1722	1851	1743	1919	1,654
Riverside Univ Health System	1676	1590	1494	1596	1642	1564	1576	1616	1671	1474	1630	1574	1882	1,614
San Geronio Mem Hospital	673	642	597	586	594	561	543	591	595	548	520	576	677	593
Temecula Valley Hospital	628	514	515	569	514	555	566	566	565	606	585	552	624	566
Riverside County Total	14634	14037	13116	14455	14244	14014	13706	14736	14643	13817	14351	14190	15575	14271

COMPLIANCE. Compliance is a frequency comparison between the total number of transports and those resulting in APOD. The table below shows compliance by hospital for the last 12 months compared to the current month.

														<i>Compliance</i>	
														High	Low
APOT % Compliance by Hospital for the last 12 months															
	2022					2023							Average		
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov		Dec	
Corona Regional Med Ctr	58%	69%	68%	64%	63%	69%	77%	72%	77%	73%	76%	74%	69%	70%	
Desert Regional Med Ctr	90%	91%	92%	88%	94%	94%	93%	91%	95%	98%	95%	91%	91%	93%	
Eisenhower Health	95%	96%	96%	95%	97%	99%	98%	99%	99%	99%	99%	98%	95%	97%	
Hemet Valley Hospital	42%	43%	44%	52%	60%	58%	54%	58%	56%	54%	44%	49%	42%	50%	
Inland Valley Med Ctr	72%	81%	69%	75%	72%	79%	79%	78%	65%	63%	62%	68%	64%	71%	
JFK Hospital	99%	99%	98%	99%	98%	99%	99%	99%	99%	99%	99%	100%	98%	99%	
Kaiser Hospital Moreno Valley	78%	74%	70%	77%	79%	76%	75%	75%	77%	82%	74%	77%	75%	76%	
Kaiser Hospital Riverside	62%	75%	68%	72%	72%	76%	75%	84%	77%	76%	81%	75%	70%	74%	
Loma Linda Univ Med Ctr Mur	63%	76%	69%	81%	76%	75%	78%	79%	68%	70%	66%	65%	60%	71%	
Menifee Med Ctr	40%	49%	48%	54%	58%	65%	62%	63%	64%	82%	83%	66%	48%	60%	
Palo Verde Hospital	96%	95%	99%	98%	98%	97%	100%	98%	96%	98%	96%	97%	99%	98%	
Parkview Community Hospital	75%	88%	90%	85%	84%	91%	93%	95%	97%	95%	96%	96%	92%	91%	
Rancho Springs Med Ctr	80%	88%	72%	79%	76%	84%	82%	91%	77%	82%	81%	79%	71%	80%	
Riverside Community Hospital	48%	51%	50%	46%	45%	62%	67%	96%	93%	94%	89%	95%	83%	71%	
Riverside University Health System	88%	91%	93%	92%	95%	95%	94%	91%	95%	94%	91%	93%	87%	92%	
San Gorgonio Mem Hospital	61%	66%	71%	66%	70%	69%	70%	65%	63%	68%	69%	63%	55%	66%	
Temecula Valley Hospital	56%	68%	68%	72%	65%	78%	78%	78%	73%	71%	64%	66%	74%	70%	
Riverside County Compliance	72%	77%	75%	76%	77%	80%	81%	85%	83%	83%	81%	82%	77%	79%	

APOT-1. APOT-1 is an Ambulance Patient Offload Time interval measure of the 90th percentile. This metric is a continuous variable measured in hours and minutes then aggregated and reported at the 90th percentile. The table below illustrates APOT-1 by hospital for the last 12 months compared to the current month

APOT-1 (90th Percentile) for the last 12 Months														
Hospital	2022			2023									Avg APOT-1	
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov		Dec
Corona Regional Med Ctr	1:50	1:06	1:16	1:18	1:22	0:58	0:48	1:02	0:48	0:52	0:46	0:57	1:08	1:05
Desert Regional Med Ctr	0:32	0:29	0:28	0:37	0:25	0:25	0:27	0:30	0:24	0:20	0:23	0:29	0:30	0:27
Eisenhower Health	0:24	0:22	0:23	0:24	0:20	0:18	0:18	0:17	0:17	0:17	0:16	0:19	0:23	0:19
Hemet Valley Hospital	2:28	1:36	1:38	1:18	1:09	1:00	1:19	1:06	1:15	1:18	1:38	1:37	2:17	1:30
Inland Valley Med Ctr	0:54	0:43	1:11	0:57	1:01	0:47	0:52	0:53	1:19	1:26	1:21	1:11	1:34	1:05
JFK Hospital	0:15	0:15	0:16	0:14	0:15	0:15	0:14	0:14	0:15	0:15	0:16	0:16	0:17	0:15
Kaiser Hospital Moreno Valley	0:50	0:54	0:59	0:46	0:42	0:48	0:49	0:46	0:55	0:42	0:54	0:51	1:00	0:50
Kaiser Hospital Riverside	1:24	0:55	1:06	1:02	0:58	0:49	0:48	0:39	0:46	0:52	0:39	0:56	1:08	0:55
Loma Linda Univ Med Ctr Mur	1:07	0:49	1:03	0:38	0:50	0:53	0:45	0:43	0:58	0:51	0:54	1:24	1:27	0:57
Menifee Med Ctr	2:07	1:37	1:30	1:10	1:18	0:58	1:00	0:58	1:00	0:39	0:34	1:00	1:39	1:11
Palo Verde Hospital	0:19	0:22	0:15	0:21	0:19	0:15	0:15	0:17	0:18	0:15	0:17	0:19	0:13	0:17
Parkview Community Hospital	0:50	0:34	0:30	0:36	0:37	0:30	0:28	0:26	0:24	0:26	0:24	0:26	0:29	0:30
Rancho Springs Med Ctr	0:47	0:35	1:02	0:48	1:04	0:42	0:39	0:30	1:00	0:50	0:45	0:50	1:21	0:50
Riverside Comm Hospital	1:23	1:25	1:21	1:27	1:24	1:03	1:01	0:19	0:26	0:26	0:31	0:27	0:44	0:55
Riverside Univ Health System	0:33	0:30	0:28	0:29	0:28	0:27	0:29	0:29	0:26	0:27	0:29	0:28	0:34	0:29
San Gorgonio Mem Hospital	1:22	1:10	1:02	1:00	1:06	1:00	1:00	1:04	1:15	1:06	1:06	1:09	1:38	1:09
Temecula Valley Hospital	1:21	0:53	0:53	0:49	0:55	0:45	0:46	0:42	0:44	0:48	1:02	0:53	0:46	0:52
Riverside County Compliance	1:03	0:52	0:56	0:53	0:52	0:44	0:44	0:39	0:43	0:42	0:43	0:46	0:57	0:48

AMBULANCE DIVERSIONS

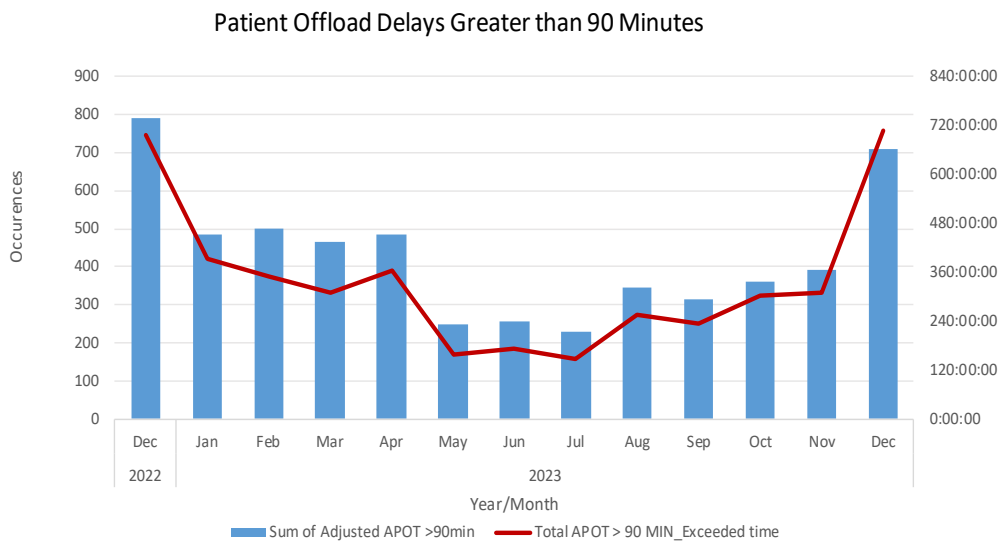
REMSA Policy 6103 (<https://www.remsa.us/policy/6103.pdf>) describes ground and air ambulance diversions to facilitate safe transport of patients to the closest alternate facility. Ambulance Diversions described here are those activated as a result of unusual circumstances at a facility limiting access to emergency care (*Internal Disaster - INT*) or a temporary outage in Specialty Care services (*STEMI, Stroke, Trauma*). The following tables provide diversion history by count of occurrences and total hours/minutes by facility for a rolling 12 months compared to the current month. *Hospitals not listed had no diversions during this evaluation period.*

Diversions by Count	2022										2023		Total	
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov		Dec
INT			1	2	1				2					6
Corona Regional Medical Center									1					1
Menifee Valley Medical Center				1										1
Temecula Valley Hospital					1									1
Inland Valley Medical Center									1					1
Riverside University Health System				1										1
Parkview Community Hospital			1											1
STEMI	1					1								2
Riverside Community Hospital	1					1								2
Stroke	1	1	1					1	1					5
Riverside Community Hospital	1													1
Kaiser Permanente Moreno Valley Medical Center		1												1
Parkview Community Hospital			1					1	1					3
Trauma	2	1		4		1	3	1		1			1	14
Riverside Community Hospital	2			3			2	1		1				9
Inland Valley Medical Center		1		1		1	1							4
Riverside University Health System													1	1

Diversions by HH:MM	2022										2023		Total	
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov		Dec
INT			0:23	3:40	21:56				9:07					
Corona Regional Medical Center									9:03					
Menifee Valley Medical Center				0:00										
Temecula Valley Hospital					21:56									
Inland Valley Medical Center									0:04					
Riverside University Health System				3:39										
Parkview Community Hospital			0:23											
STEMI	0:28					4:00								
Riverside Community Hospital	0:28					4:00								
Stroke	0:27	3:34	1:09					0:08	10:22					
Riverside Community Hospital	0:27													
Kaiser Permanente Moreno Valley Medical Center		3:34												
Parkview Community Hospital			1:09					0:08	10:22					
Trauma	3:41	1:11		7:07		0:32	3:24	1:19		0:08				0:01
Riverside Community Hospital	3:41			6:57			2:00	1:19		0:08				
Inland Valley Medical Center		1:11		0:09		0:32	1:23							
Riverside University Health System														0:01

AMBULANCE REDIRECTION

REMSA [Policy 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 a 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 countywide breakdown of APOD occurrences where ambulances were documented as held for greater than 90 minutes before the transfer of care for the last 12 months compared to the current month.



The table below shows the count of ambulances that held for greater than 90 minutes and total hours accumulated after 90-minute threshold by facility for the reporting month.

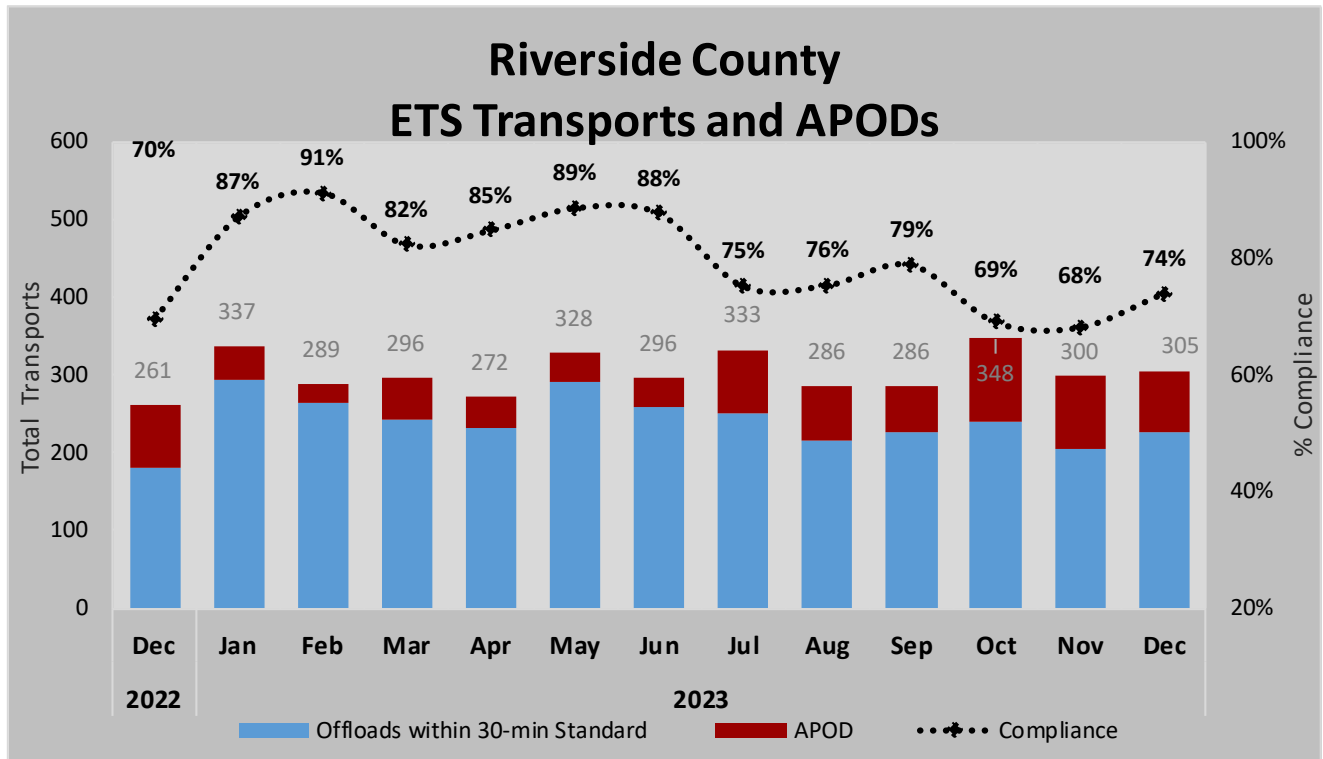
Facility	Total Time APOT>90 min (HR: MM: S)	Total Incidents APOT>90 min
Corona Regional Med Ctr	28:19:27	42
Desert Regional Med Ctr	3:52:04	8
Eisenhower Health	0:07:29	1
Hemet Valley Hospital	244:57:53	181
Inland Valley Med Ctr	120:25:42	116
JFK Hospital	0:21:37	2
Kaiser Hospital Moreno Valley	7:16:07	12
Kaiser Hospital Riverside	26:53:54	38
Loma Linda Univ Med Ctr Mur	83:31:43	67
Menifee Med Ctr	43:05:35	59
Palo Verde Hospital	0:00:00	0
Parkview Community Hospital	0:10:04	1
Rancho Springs Med Ctr	53:30:20	58
Riverside Community Hospital	24:06:49	40
Riverside University Health System	0:02:51	1
San Gorgonio Mem Hospital	65:54:15	77
Temecula Valley Hospital	4:49:36	8
Grand Total	707:25:26	711

EMERGENCY TREATMENT SERVICES

Transports to Emergency Treatment Services (ETS) comprise over 3% of overall transports. This is significant enough to impact the EMS system and, therefore, warrants reporting. However, transports to ETS do not meet the EMSA definitions for APOT (see page 6); therefore, they are not included with the previous APOT aggregates.

December 2023 - Emergency Treatment Services						
	Total Offload			APODs	APOD Compliance	APOT-1
	Transports to ETS	Time	APOD Hours			
Emergency Treatment Services	305	130:26:34	16:37:22	79	74.1%	0:40:11

The chart below represents Riverside County’s total number of *ETS ambulance transports, patient offload delay (APOD), and percent compliance* for the current month and a rolling 12 months prior.



APOT AND APOD DEFINITIONS

9-1-1 Ambulance Response

For the purpose of reporting patient offload time and delays, only ground transport units responding to 9-1-1 incidents are included in this report. To avoid duplicate response counts, this excludes all records from First Responder Fire agencies also arriving on scene as part of Riverside County's dual 9-1-1 medical response system. With the exception of ETS transports which are predominantly from local hospitals, it also excludes interfacility transports and other call types such as air ambulances.

APOT -1 Specifications

Criteria: All 911 transports to a hospital emergency department for which the patient arrival and transfer dates and times are "logical and present."¹

Method: Aggregate of all transfer times and reported at the 90th percentile (the value for which 90% of the times are shorter).

Ambulance Patient Offload Time (APOT)

The Time interval between the arrival of an 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.² 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.³ REMSA obtains both times from the ePCR.

Ambulance Patient Offload Delay (APOD)

Any delay in ambulance patient offload time (APOT) that exceeds the local ambulance patient offload time standard of 25/30 minutes (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.⁴ 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.⁵ *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 between the total number of transports and those resulting in APODs with an ED-related origin.

¹ Ibid., APOT-1 Specifications.

² Health and Safety Code Division 2.5, Chapter 3, Article 1, Section 1797.120(b)

³ 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

⁵ REMSA Policy 4109, Transfer of Patient Care. <https://www.remsa.us/policy/4109.pdf>

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