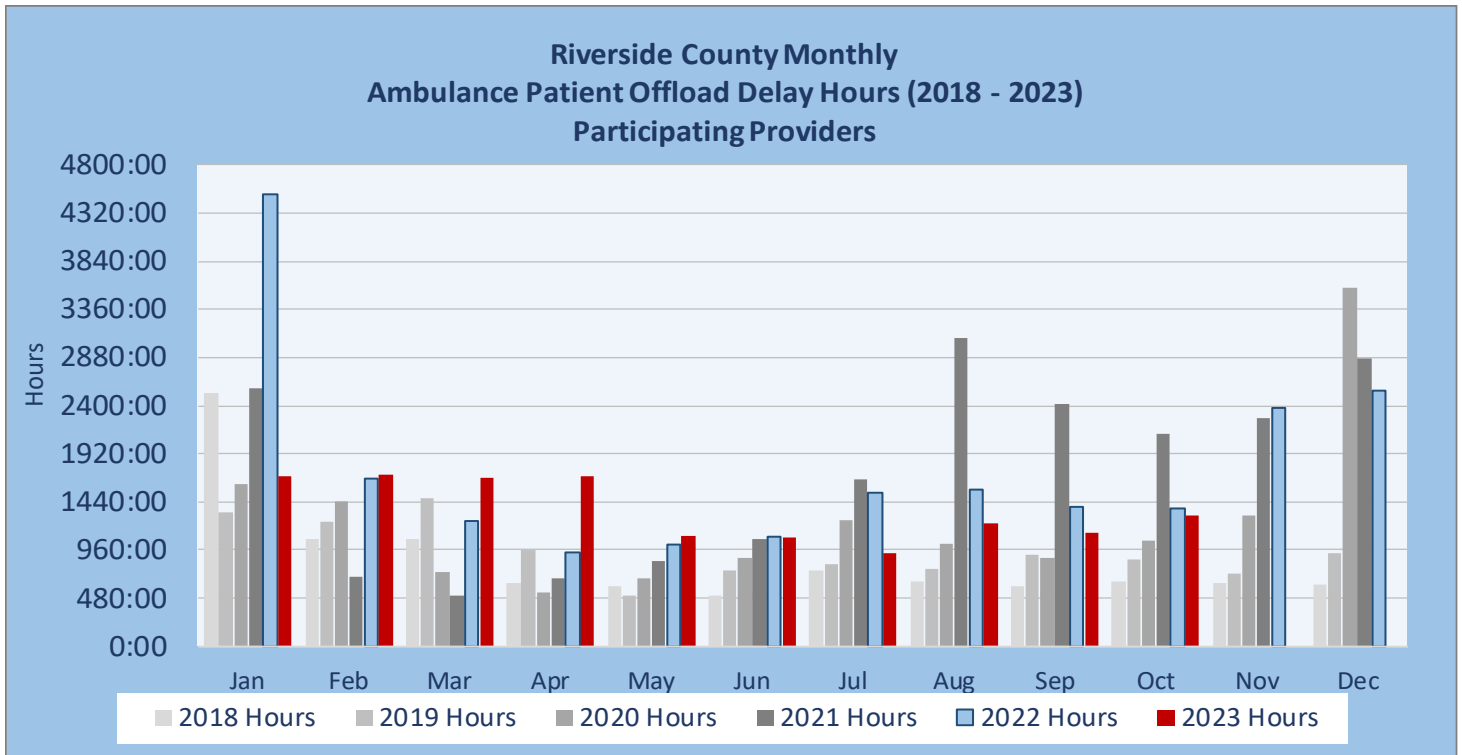# Ambulance Patient Offload Time
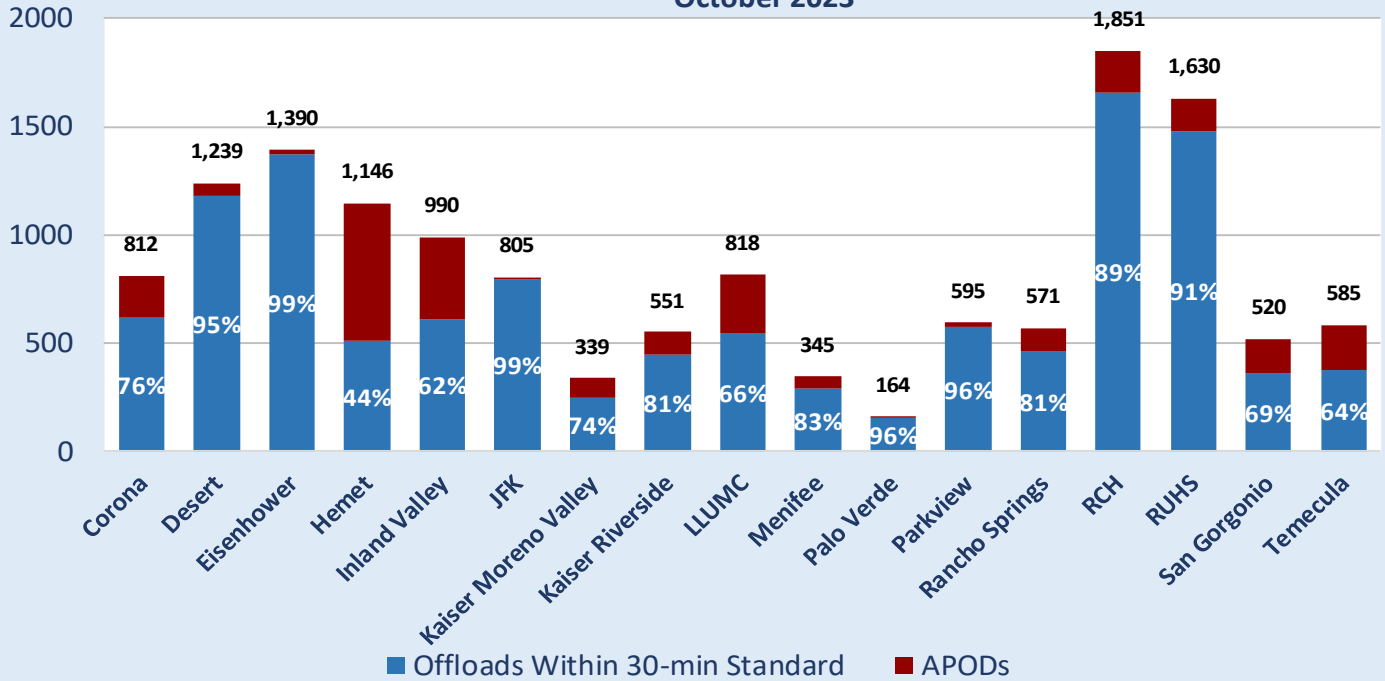
October 2023

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.
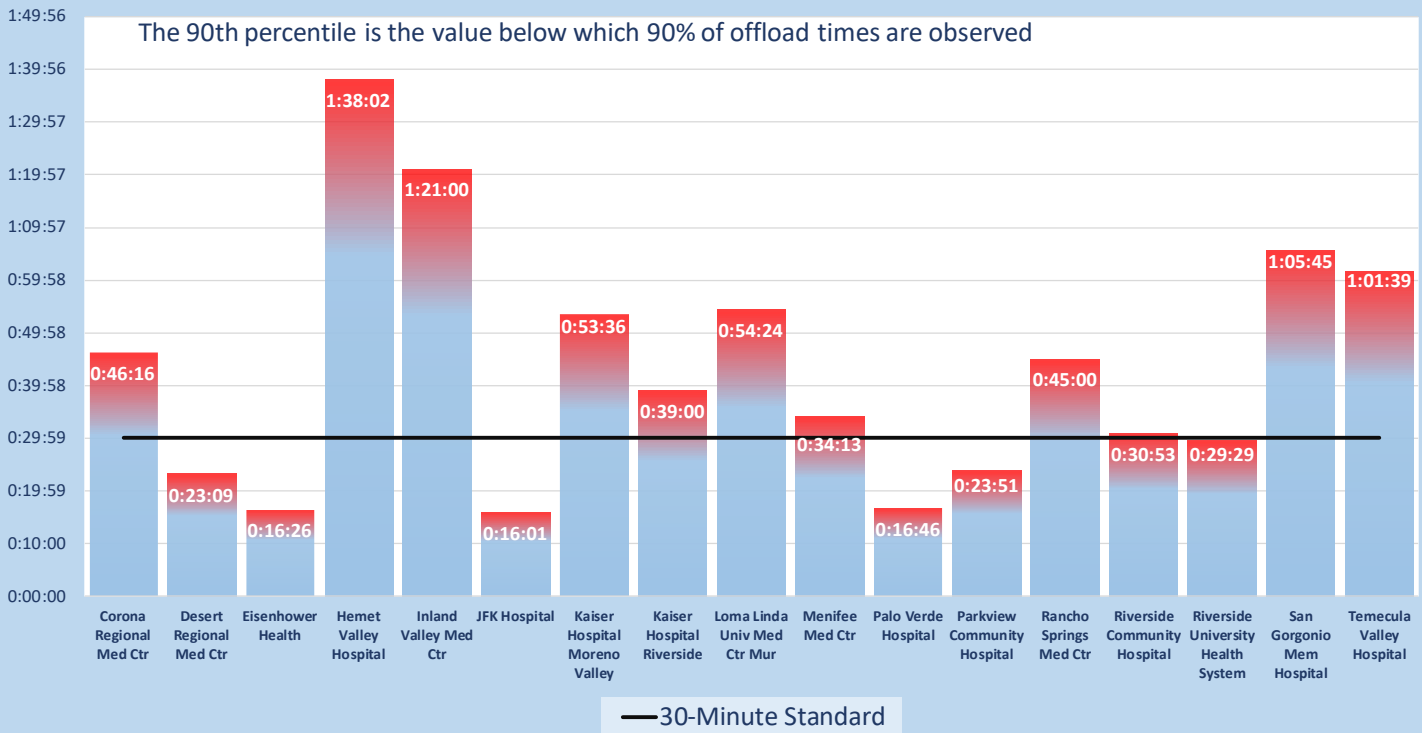

**Riverside County Monthly
Ambulance Patient Offload Delay Hours (2018 - 2023)
Participating Providers**

Legend: 2018 Hours, 2019 Hours, 2020 Hours, 2021 Hours, 2022 Hours, 2023 Hours

October 2023	ALS Transports	APOT	APOD Hours	APODs	APOD Compliance	APOT - 1
Corona Regional Med Ctr	812	331:08:41	75:33:28	195	76.0%	0:46:16
Desert Regional Med Ctr	1,239	283:59:04	20:13:37	61	95.1%	0:23:09
Eisenhower Health	1,390	250:04:24	3:48:38	20	98.6%	0:16:26
Hemet Valley Hospital	1,146	939:25:31	456:52:35	638	44.3%	1:38:02
Inland Valley Med Ctr	990	579:47:01	234:47:56	376	62.0%	1:21:00
JFK Hospital	805	112:49:16	3:50:05	6	99.3%	0:16:01
Kaiser Hospital Moreno Valley	339	148:12:09	36:35:38	89	73.7%	0:53:36
Kaiser Hospital Riverside	551	194:54:32	27:40:30	103	81.3%	0:39:00
Loma Linda Univ Med Ctr Mur	818	429:01:20	125:12:53	275	66.4%	0:54:24
Menifee Med Ctr	345	129:01:09	12:20:41	58	83.2%	0:34:13
Palo Verde Hospital	164	27:05:02	3:48:55	6	96.3%	0:16:46
Parkview Community Hospital	595	154:36:16	3:34:27	21	96.5%	0:23:51
Rancho Springs Med Ctr	571	225:03:04	52:14:26	110	80.7%	0:45:00
Riverside Community Hospital	1,851	539:21:38	61:20:04	197	89.4%	0:30:53
Riverside University Health System	1,630	500:01:16	18:49:45	148	90.9%	0:29:29
San Gorgonio Mem Hospital	520	282:21:50	88:24:51	159	69.4%	1:05:45
Temecula Valley Hospital	585	296:27:35	83:58:47	210	64.1%	1:01:39
Grand Total	14,351	5423:19:48	1309:07:16	2672	81.4%	0:42:55

Riverside County Hospitals
Transports, APODs and % Compliance
October 2023

Chart showing Offloads Within 30-min Standard (blue) and APODs (red) for Riverside County Hospitals, October 2023.

Totals and compliance percentages by hospital:
- Corona: 812, 76%
- Desert: 1,239, 95%
- Eisenhower: 1,390, 99%
- Hemet: 1,146, 44%
- Inland Valley: 990, 62%
- JFK: 805, 99%
- Kaiser Moreno Valley: 339, 74%
- Kaiser Riverside: 551, 81%
- LLUMC: 818, 66%
- Menifee: 345, 83%
- Palo Verde: 164, 96%
- Parkview: 595, 96%
- Rancho Springs: 571, 81%
- RCH: 1,851, 89%
- RUHS: 1,630, 91%
- San Gorgonio: 520, 69%
- Temecula: 585, 64%

Legend: ■ Offloads Within 30-min Standard ■ APODs

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

The 90th percentile is the value below which 90% of offload times are observed

APOT-1 90th Percentile values by hospital:
- Corona Regional Med Ctr: 0:46:16
- Desert Regional Med Ctr: 0:23:09
- Eisenhower Health: 0:16:26
- Hemet Valley Hospital: 1:38:02
- Inland Valley Med Ctr: 1:21:00
- JFK Hospital: 0:16:01
- Kaiser Hospital Moreno Valley: 0:53:36
- Kaiser Hospital Riverside: 0:39:00
- Loma Linda Univ Med Ctr Mur: 0:54:24
- Menifee Med Ctr: 0:34:13
- Palo Verde Hospital: 0:16:46
- Parkview Community Hospital: 0:23:51
- Rancho Springs Med Ctr: 0:45:00
- Riverside Community Hospital: 0:30:53
- Riverside University Health System: 0:29:29
- San Gorgonio Mem Hospital: 1:05:45
- Temecula Valley Hospital: 1:01:39

Legend: — 30-Minute Standard

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.

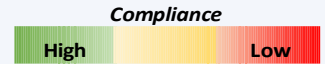# APOT AND APOD TRENDS: *ROLLING ANNUAL REVIEW*

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.

Riverside County
Responses, Transports and APODs

	Oct 2022	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
9-1-1 Responses	19,902	20,469	21,141	20,195	18,695	20,840	20,306	20,306	19,531	21,590	21,134	20,038	20,707
9-1-1 Transports	70%	69%	69%	70%	70%	69%	70%	69%	70%	68%	69%	69%	69%
APODs	21%	27%	28%	23%	25%	24%	23%	20%	19%	15%	17%	17%	19%
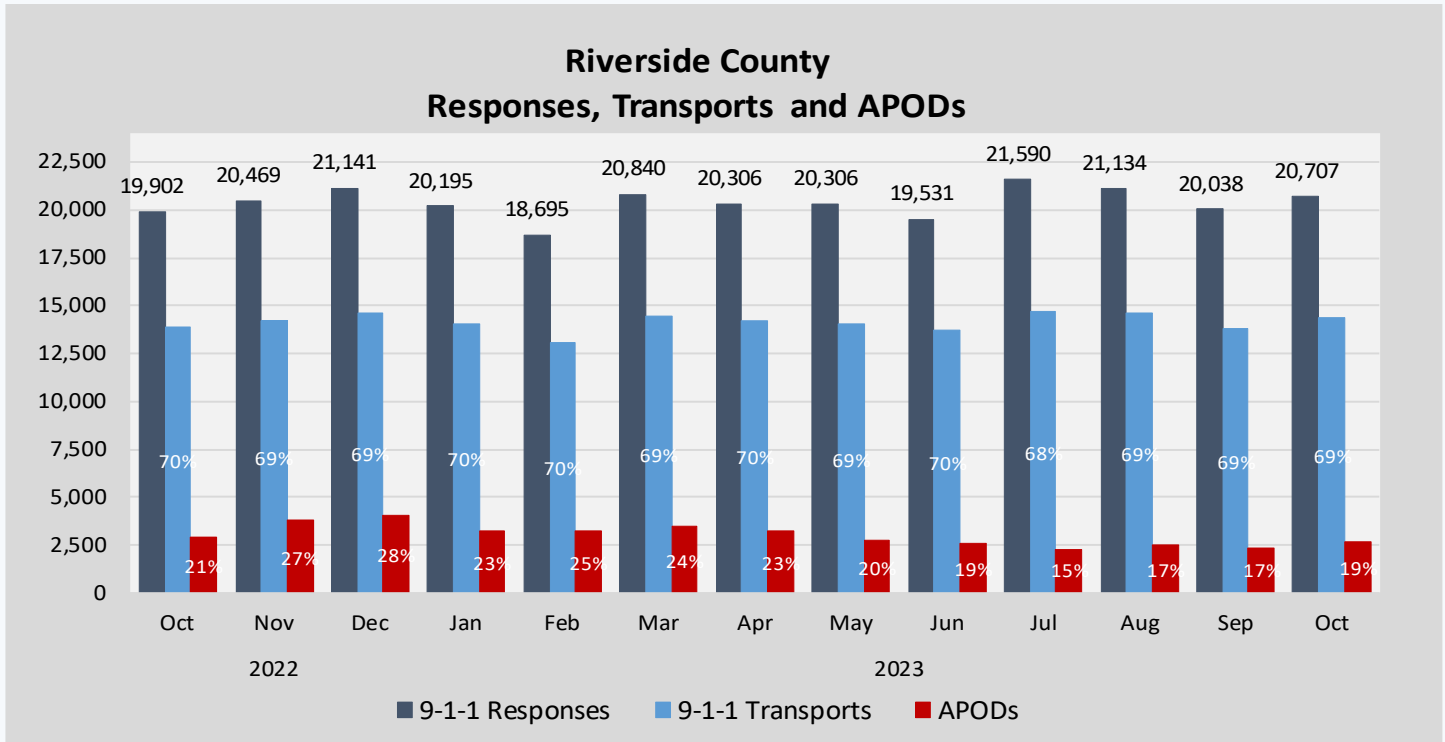
TRANSPORT VOLUME. Transport volume for each hospital over a 12 month period compared to the current month is described below. Each hospital can be categorized as a low to high volume facility relative to all facilties in the county. Hospitals are color coded ranging from low to high based on an average transports of the last 12 months.

Transport Volume — Low — High

Hospital	2022 Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	2023 Oct	Monthly Avg
Corona Regional Med Ctr	779	778	829	804	733	802	783	783	782	911	896	785	812	806
Desert Regional Med Ctr	1399	1298	1402	1378	1308	1403	1360	1364	1254	1369	1273	1199	1239	1,327
Eisenhower Health	1294	1415	1455	1381	1288	1474	1371	1316	1338	1365	1388	1423	1390	1,377
Hemet Valley Hospital	1162	1146	879	1072	998	1206	1206	1245	1167	1346	1330	1207	1146	1,162
Inland Valley Med Ctr	1041	972	1069	986	877	952	995	977	926	1034	998	955	990	982
JFK Hospital	668	734	765	752	690	759	837	705	728	749	731	651	805	736
Kaiser Hospital Moreno Valley	323	364	380	366	374	383	348	376	349	351	375	319	339	357
Kaiser Hospital Riverside	549	529	595	582	491	561	567	572	530	557	585	552	551	555
Loma Linda Univ Med Ctr Mur	825	809	901	828	782	849	852	826	776	788	810	786	818	819
Menifee Med Ctr	293	276	390	320	288	323	307	270	303	301	297	332	345	311
Palo Verde Hospital	143	152	167	137	142	130	136	154	140	164	163	131	164	148
Parkview Community Hospital	726	768	760	696	695	790	704	643	612	655	608	587	595	680
Rancho Springs Med Ctr	475	557	597	488	497	555	513	477	466	529	560	540	571	525
Riverside Comm Hospital	1456	1506	1468	1501	1347	1517	1515	1626	1650	1844	1798	1722	1851	1,600
Riverside Univ Health System	1570	1711	1676	1590	1494	1596	1642	1564	1576	1616	1671	1474	1630	1,601
San Gorgonio Mem Hospital	566	622	673	642	597	586	594	561	543	591	595	548	520	588
Temecula Valley Hospital	582	556	628	514	515	569	514	555	566	566	565	606	585	563
Riverside County Total	**13851**	**14193**	**14634**	**14037**	**13116**	**14455**	**14244**	**14014**	**13706**	**14736**	**14643**	**13817**	**14351**	**14138**

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.

Compliance — High ... Low

APOT % Compliance by Hospital for the last 12 months

Hospital	2022 Oct	Nov	Dec	2023 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Average
Corona Regional Med Ctr	67%	58%	58%	69%	68%	64%	63%	69%	77%	72%	77%	73%	76%	68%
Desert Regional Med Ctr	96%	92%	90%	91%	92%	88%	94%	94%	93%	91%	95%	98%	95%	93%
Eisenhower Health	98%	96%	95%	96%	96%	95%	97%	99%	98%	99%	99%	99%	99%	97%
Hemet Valley Hospital	58%	50%	42%	43%	44%	52%	60%	58%	54%	58%	56%	54%	44%	52%
Inland Valley Med Ctr	76%	78%	72%	81%	69%	75%	72%	79%	79%	78%	65%	63%	62%	73%
JFK Hospital	100%	98%	99%	99%	98%	99%	98%	99%	99%	99%	99%	99%	99%	99%
Kaiser Hospital Moreno Valley	75%	65%	78%	74%	70%	77%	79%	76%	75%	75%	77%	82%	74%	75%
Kaiser Hospital Riverside	57%	52%	62%	75%	68%	72%	72%	76%	75%	84%	77%	76%	81%	71%
Loma Linda Univ Med Ctr Mur	75%	71%	63%	76%	69%	81%	76%	75%	78%	79%	68%	70%	66%	73%
Menifee Med Ctr	73%	40%	40%	49%	48%	54%	58%	65%	62%	63%	64%	82%	83%	60%
Palo Verde Hospital	98%	97%	96%	95%	99%	98%	98%	97%	100%	98%	96%	98%	96%	97%
Parkview Community Hospital	90%	77%	75%	88%	90%	85%	84%	91%	93%	95%	97%	95%	96%	89%
Rancho Springs Med Ctr	79%	73%	80%	88%	72%	79%	76%	84%	82%	91%	77%	82%	81%	80%
Riverside Community Hospital	54%	46%	48%	51%	50%	46%	45%	62%	67%	96%	93%	94%	89%	65%
Riverside University Health System	91%	89%	88%	91%	93%	92%	95%	95%	94%	91%	95%	94%	91%	92%
San Gorgonio Mem Hospital	82%	65%	61%	66%	71%	66%	70%	69%	70%	65%	63%	68%	69%	68%
Temecula Valley Hospital	72%	66%	56%	68%	68%	72%	65%	78%	78%	78%	73%	71%	64%	70%
Riverside County Compliance	**79%**	**73%**	**72%**	**77%**	**75%**	**76%**	**77%**	**80%**	**81%**	**85%**	**83%**	**83%**	**81%**	**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 Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	2023 Jun	Jul	Aug	Sep	Oct	Avg APOT-1
Corona Regional Med Ctr	1:09	1:35	1:50	1:06	1:16	1:18	1:22	0:58	0:48	1:02	0:48	0:52	0:46	1:08
Desert Regional Med Ctr	0:21	0:28	0:32	0:29	0:28	0:37	0:25	0:25	0:27	0:30	0:24	0:20	0:23	0:26
Eisenhower Health	0:18	0:21	0:24	0:22	0:23	0:24	0:20	0:18	0:18	0:17	0:17	0:17	0:16	0:19
Hemet Valley Hospital	1:11	1:33	2:28	1:36	1:38	1:18	1:09	1:00	1:19	1:06	1:15	1:18	1:38	1:25
Inland Valley Med Ctr	0:56	0:52	0:54	0:43	1:11	0:57	1:01	0:47	0:52	0:53	1:19	1:26	1:21	1:00
JFK Hospital	0:14	0:15	0:15	0:15	0:16	0:14	0:15	0:15	0:14	0:14	0:15	0:15	0:16	0:14
Kaiser Hospital Moreno Valley	1:00	1:14	0:50	0:54	0:59	0:46	0:42	0:48	0:49	0:46	0:55	0:42	0:54	0:52
Kaiser Hospital Riverside	1:25	1:51	1:24	0:55	1:06	1:02	0:58	0:49	0:48	0:39	0:46	0:52	0:39	1:01
Loma Linda Univ Med Ctr Mur	0:45	1:08	1:07	0:49	1:03	0:38	0:50	0:53	0:45	0:43	0:58	0:51	0:54	0:52
Menifee Med Ctr	0:51	2:14	2:07	1:37	1:30	1:10	1:18	0:58	1:00	0:58	1:00	0:39	0:34	1:13
Palo Verde Hospital	0:19	0:16	0:19	0:22	0:15	0:21	0:19	0:15	0:15	0:17	0:18	0:15	0:17	0:17
Parkview Community Hospital	0:31	0:55	0:50	0:34	0:30	0:36	0:37	0:30	0:28	0:26	0:24	0:26	0:24	0:33
Rancho Springs Med Ctr	0:53	1:04	0:47	0:35	1:02	0:48	1:04	0:42	0:39	0:30	1:00	0:50	0:45	0:49
Riverside Comm Hospital	1:10	1:30	1:23	1:25	1:21	1:27	1:24	1:03	1:01	0:19	0:26	0:26	0:31	1:02
Riverside Univ Health System	0:30	0:32	0:33	0:30	0:28	0:29	0:28	0:27	0:29	0:29	0:26	0:27	0:29	0:29
San Gorgonio Mem Hospital	0:44	1:22	1:22	1:10	1:02	1:00	1:06	1:00	1:00	1:04	1:15	1:06	1:06	1:05
Temecula Valley Hospital	0:49	0:56	1:21	0:53	0:53	0:49	0:55	0:45	0:46	0:42	0:44	0:48	1:02	0:52
Riverside County Compliance	**0:48**	**1:02**	**1:03**	**0:52**	**0:56**	**0:53**	**0:52**	**0:44**	**0:44**	**0:39**	**0:43**	**0:42**	**0:43**	**0:49**

# 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
Diversion Category/Facility	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
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	1			**6**
Riverside Community Hospital			1											1
Kaiser Permanente Moreno Valley Medical Center				1										1
Rancho Springs Medical Center	1													1
Parkview Community Hospital					1					1	1			3
Trauma	1		2	1		4		1	3	1		1		**14**
Riverside Community Hospital	1		2			3			2	1		1		10
Inland Valley Medical Center				1		1		1	1					4

Diversions by HH:MM	2022												2023
Diversion Category/Facility	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
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	7:57		0:27	3:34	1:09					0:08	10:22		
Riverside Community Hospital			0:27										
Kaiser Permanente Moreno Valley Medical Center				3:34									
Rancho Springs Medical Center	7:57												
Parkview Community Hospital					1:09					0:08	10:22		
Trauma	0:24		3:41	1:11		7:07		0:32	3:24	1:19		0:08	
Riverside Community Hospital	0:24		3:41			6:57			2:00	1:19		0:08	
Inland Valley Medical Center				1:11		0:09		0:32	1:23				

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.

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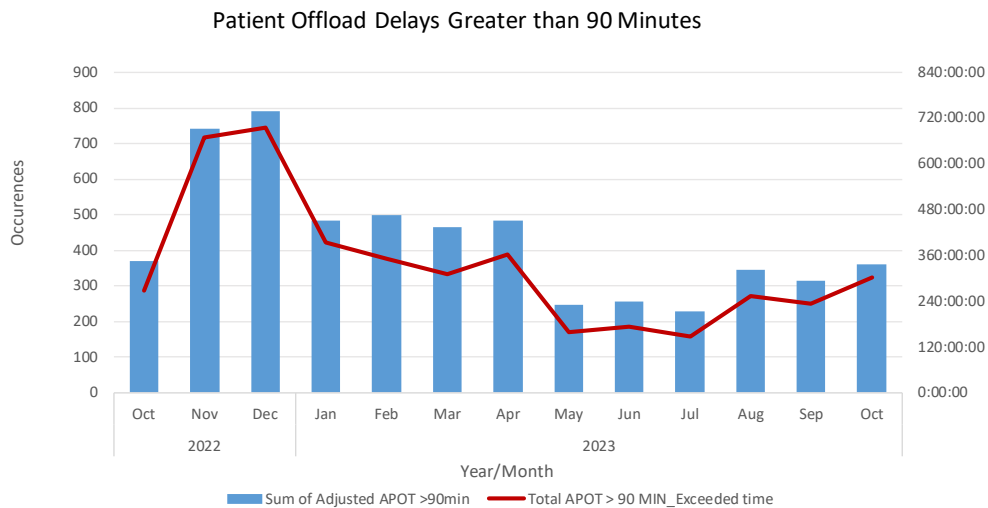
The table below shows the count of ambulances that held for greater than 90 minutes and total hours accumulated after 90-minute threshold by facility for the reporting month.

Facility	Total Time APOT>90 min (HR: MM: S)	Total Incidents APOT>90 min
Corona Regional Med Ctr	11:11:25	19
Desert Regional Med Ctr	1:03:37	5
Eisenhower Health	0:00:00	0
Hemet Valley Hospital	150:11:21	137
Inland Valley Med Ctr	59:39:52	81
JFK Hospital	0:31:45	2
Kaiser Hospital Moreno Valley	4:47:18	8
Kaiser Hospital Riverside	1:09:20	3
Loma Linda Univ Med Ctr Mur	34:06:17	36
Menifee Med Ctr	0:15:06	2
Palo Verde Hospital	0:03:09	1
Parkview Community Hospital	0:00:00	0
Rancho Springs Med Ctr	8:09:41	16
Riverside Community Hospital	6:47:40	13
Riverside University Health System	0:01:11	1
San Gorgonio Mem Hospital	16:37:48	21
Temecula Valley Hospital	6:35:56	16
Grand Total	**301:11:26**	**361**

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.

October 2023 - Emergency Treatment Services						
	Transports to ETS	Total Offload Time	APOD Hours	APODs	APOD Compliance	APOT-1
Emergency Treatment Services	348	150:25:41	18:20:20	107	69.3%	0:41:06

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.
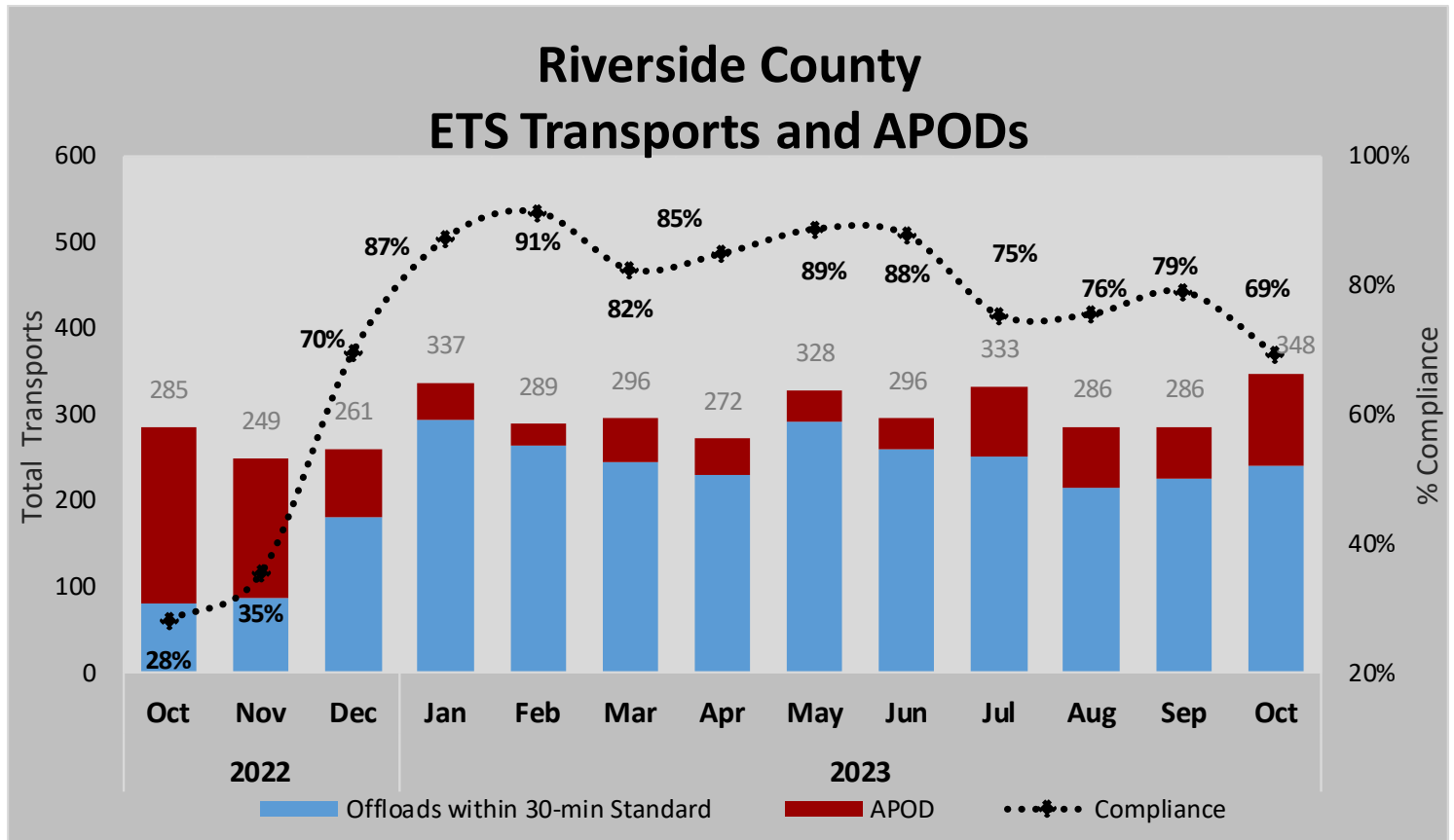
APOT AND APOD DEFINITIONS

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

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