



# Ambulance Patient Offload Time

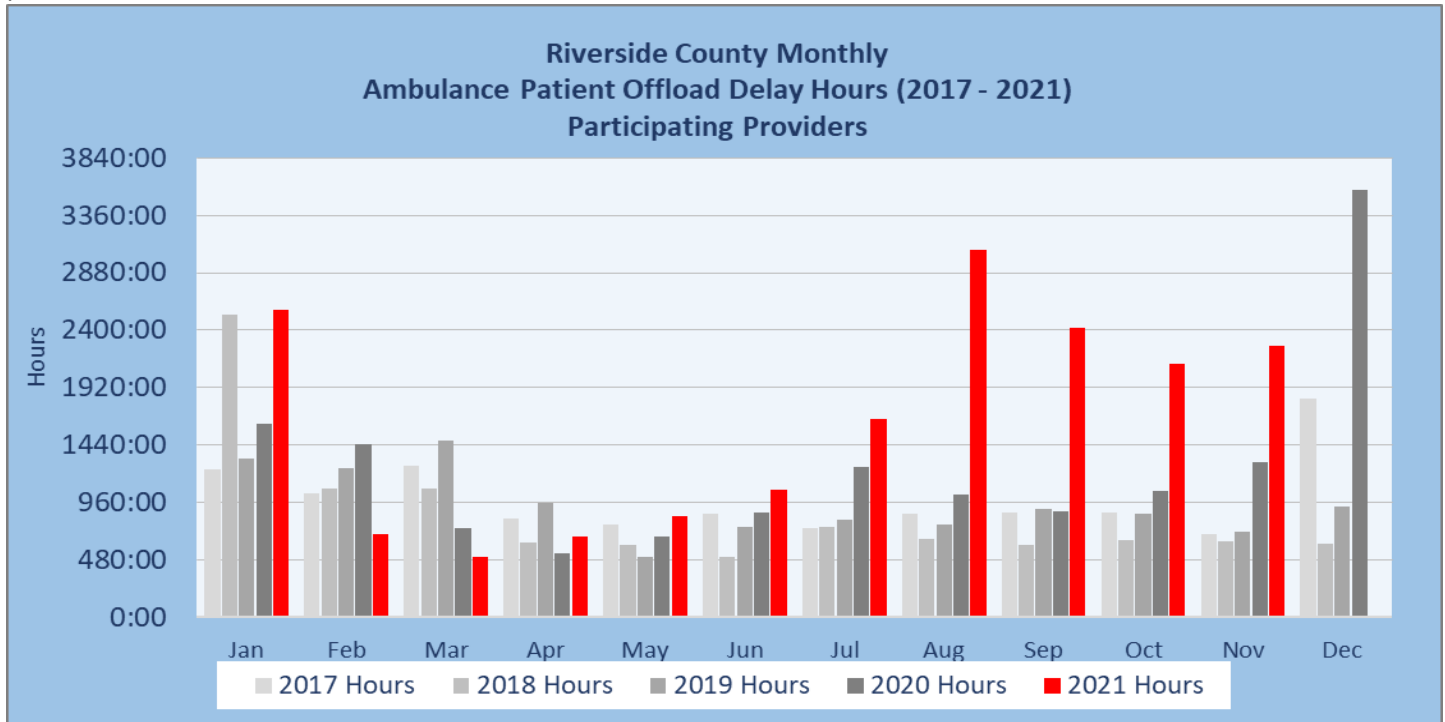
November 2021

*Monthly  
Report*

This report was updated 01/19/2022 due to a minor duplication error identified in the Nov-2021 dataset. Transport volume and APOT hours are 2% less than previously reported, however, differences in compliance percentage and APOT-1 are negligible.

## 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 has passed.

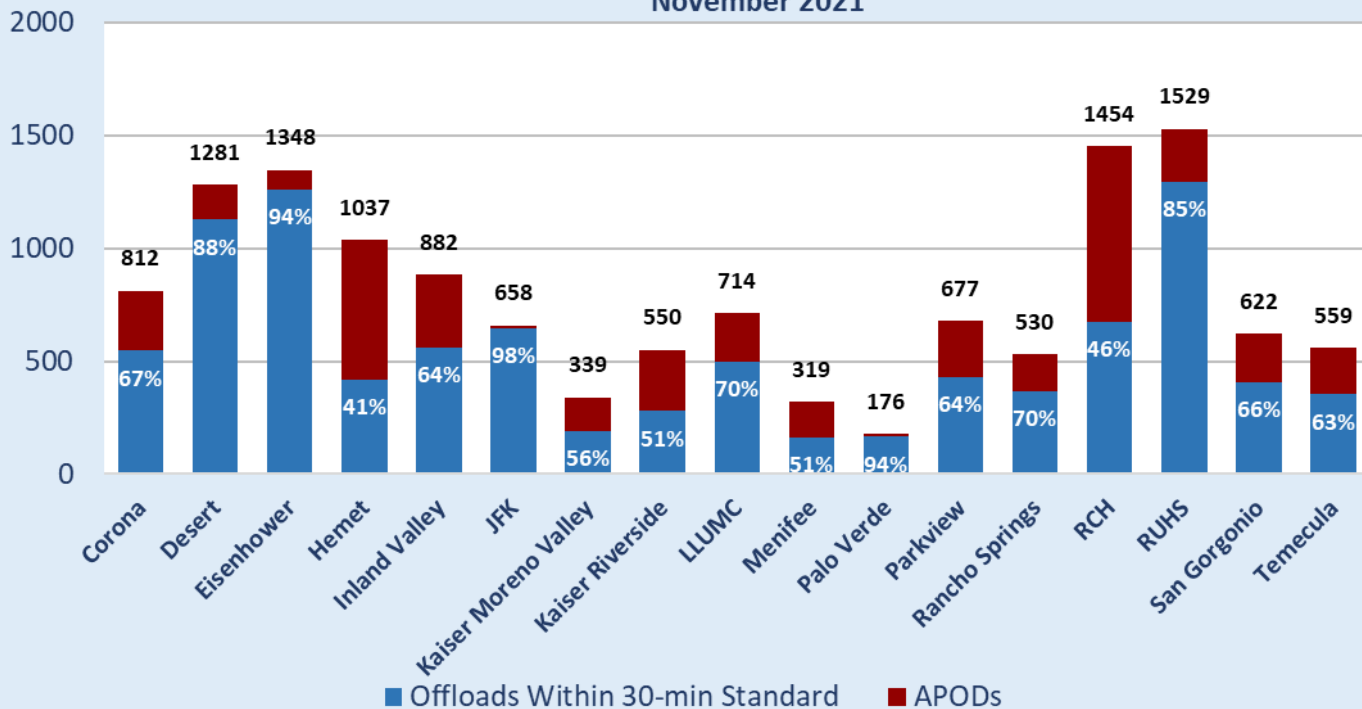


\*\*Beginning August 2017, times represented include all participating providers. Prior to August, data included AMR responses only.

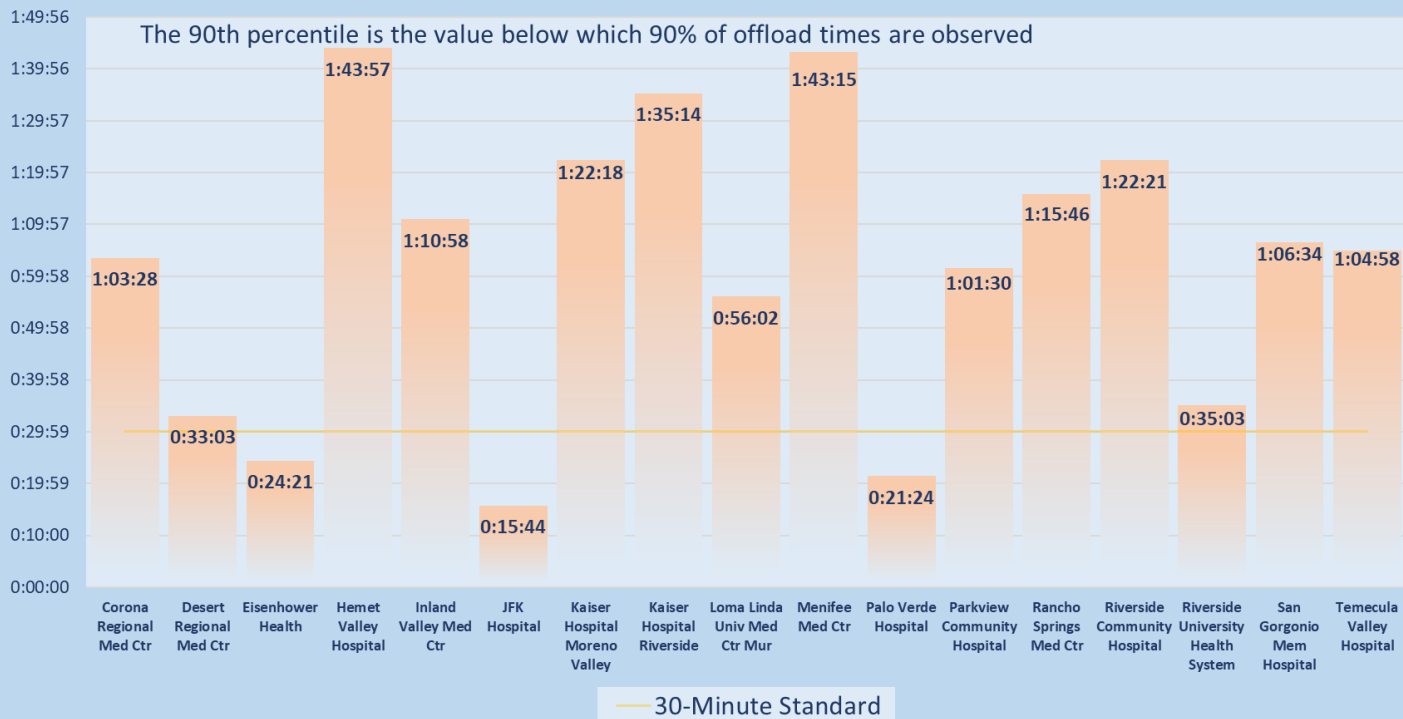
	November 2021					
	ALS Transports	APOT	APOD Hours	APODs	APOD Compliance	APOT - 1
Corona Regional Med Ctr	812	430:16:31	142:44:31	265	67.4%	1:03:28
Desert Regional Med Ctr	1,281	367:11:33	75:25:28	153	88.1%	0:33:03
Eisenhower Health	1,348	314:15:02	32:24:57	86	93.6%	0:24:21
Hemet Valley Hospital	1,037	868:55:48	<b>433:03:01</b>	617	<b>40.5%</b>	<b>1:43:57</b>
Inland Valley Med Ctr	882	470:46:26	168:28:48	320	63.7%	1:10:58
JFK Hospital	658	94:41:38	5:07:23	<b>11</b>	<b>98.3%</b>	<b>0:15:44</b>
Kaiser Hospital Moreno Valley	339	225:33:59	98:17:55	149	56.0%	1:22:18
Kaiser Hospital Riverside	550	398:01:30	184:26:44	271	50.7%	1:35:14
Loma Linda Univ Med Ctr Mur	714	351:05:11	103:54:27	214	70.0%	0:56:02
Menifee Med Ctr	319	243:30:53	115:59:22	155	51.4%	1:43:15
Palo Verde Hospital	<b>176</b>	<b>32:11:52</b>	<b>3:51:35</b>	<b>11</b>	93.8%	0:21:24
Parkview Community Hospital	677	370:48:34	123:45:09	246	63.7%	1:01:30
Rancho Springs Med Ctr	530	288:32:27	110:10:02	161	69.6%	1:15:46
Riverside Community Hospital	1,454	<b>1007:50:34</b>	427:37:48	<b>780</b>	46.4%	1:22:21
Riverside University Health System	<b>1,529</b>	522:35:39	43:35:37	232	84.8%	0:35:03
San Geronio Mem Hospital	622	328:42:06	109:41:09	213	65.8%	1:06:34
Temecula Valley Hospital	559	285:21:59	89:33:48	206	63.1%	1:04:58
<b>Grand Total</b>	<b>13,487</b>	<b>6600:21:42</b>	<b>2268:07:44</b>	<b>4,090</b>	<b>69.7%</b>	<b>1:02:40</b>

Key High Low

### Riverside County Hospitals Transports, APODs and % Compliance November 2021



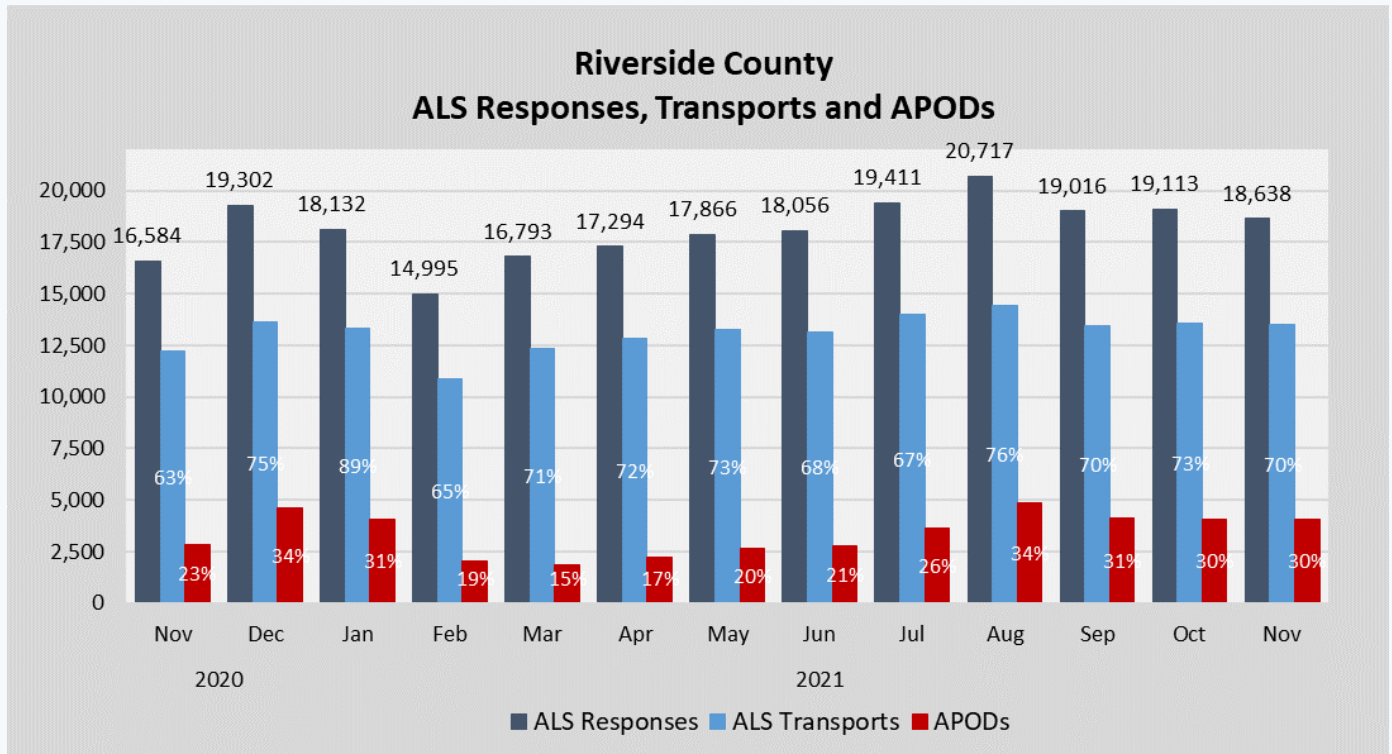
### Riverside County Hospitals APOT-1, 90th Percentile November 2021



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*

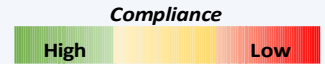
The first chart represents a summary of Riverside County’s total 9-1-1 ambulance (ALS) responses, transports, and total transports resulting in patient offload delay (APOD) for a rolling 12-months compared to the current month.



**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												Monthly			
	2020		2021												Low	High
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Avg		
Corona Regional Med Ctr	638	700	683	606	680	624	757	747	832	800	735	792	812	724		
Desert Regional Med Ctr	1090	1126	1174	969	1242	1406	1417	1395	1424	1346	1262	1247	1281	1,260		
Eisenhower Health	1148	1284	1302	1051	1272	1273	1220	1112	1187	1286	1213	1299	1348	1,230		
Hemet Valley Hospital	1318	1130	1085	1006	1229	1286	1339	1302	1256	1214	1135	1199	1037	1,195		
Inland Valley Med Ctr	808	914	806	733	829	847	943	910	946	953	886	958	882	878		
JFK Hospital	579	705	618	520	574	577	639	627	639	670	634	634	658	621		
Kaiser Hospital Moreno Valley	300	390	400	266	308	310	263	309	342	363	332	344	339	328		
Kaiser Hospital Riverside	582	674	642	459	507	505	523	540	517	579	519	527	550	548		
Loma Linda Univ Med Ctr Mur	642	709	714	546	630	589	652	639	730	666	694	658	714	660		
Menifee Med Ctr	273	324	274	204	237	249	241	269	341	359	311	286	319	284		
Palo Verde Hospital	159	154	169	128	110	147	148	143	169	162	157	168	176	153		
Parkview Community Hospital	538	713	565	384	442	486	537	526	630	668	674	653	677	576		
Rancho Springs Med Ctr	412	552	586	449	454	462	503	500	536	611	567	563	530	517		
Riverside Comm Hospital	1311	1217	1405	1242	1406	1544	1456	1511	1546	1560	1461	1506	1454	1,432		
Riverside Univ Health System	1409	1732	1643	1240	1388	1415	1514	1476	1607	1804	1619	1516	1529	1,530		
San Geronio Mem Hospital	530	737	669	541	507	575	566	602	640	697	628	632	622	611		
Temecula Valley Hospital	484	563	586	504	505	537	525	539	631	664	595	596	559	561		
<b>Riverside County Total</b>	<b>12221</b>	<b>13624</b>	<b>13321</b>	<b>10848</b>	<b>12320</b>	<b>12832</b>	<b>13243</b>	<b>13147</b>	<b>13973</b>	<b>14402</b>	<b>13422</b>	<b>13578</b>	<b>13487</b>	<b>13109</b>		

**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.



APOT % Compliance by Hospital for the last 12 months														
	2020		2021											Monthly
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Avg
Corona Regional Med Ctr	60%	41%	55%	72%	75%	75%	73%	74%	76%	54%	67%	70%	67%	66%
Desert Regional Med Ctr	91%	84%	85%	91%	88%	89%	85%	90%	92%	82%	84%	85%	88%	87%
Eisenhower Health	99%	98%	98%	99%	99%	98%	97%	98%	98%	96%	95%	94%	94%	97%
Hemet Valley Hospital	52%	43%	42%	53%	69%	70%	64%	62%	51%	49%	47%	48%	41%	53%
Inland Valley Med Ctr	85%	61%	60%	80%	88%	85%	85%	82%	66%	52%	60%	61%	64%	71%
JFK Hospital	100%	96%	97%	99%	99%	99%	98%	97%	98%	99%	97%	98%	98%	98%
Kaiser Hospital Moreno Valley	76%	65%	78%	83%	85%	72%	72%	73%	56%	57%	66%	58%	56%	69%
Kaiser Hospital Riverside	70%	58%	69%	80%	76%	71%	74%	63%	50%	53%	61%	58%	51%	64%
Loma Linda Univ Med Ctr Mur	76%	68%	70%	76%	76%	74%	66%	69%	58%	52%	62%	62%	70%	68%
Menifee Med Ctr	67%	45%	45%	67%	80%	75%	83%	72%	59%	51%	42%	54%	51%	61%
Palo Verde Hospital	96%	94%	97%	99%	99%	100%	99%	100%	98%	99%	96%	95%	94%	97%
Parkview Community Hospital	76%	51%	61%	80%	85%	77%	86%	78%	82%	68%	67%	72%	64%	73%
Rancho Springs Med Ctr	90%	72%	64%	91%	93%	92%	94%	90%	84%	64%	69%	62%	70%	80%
Riverside Community Hospital	50%	35%	44%	66%	80%	68%	56%	58%	54%	45%	46%	45%	46%	53%
Riverside University Health System	84%	75%	82%	91%	92%	91%	89%	90%	82%	79%	80%	84%	85%	85%
San Geronio Mem Hospital	87%	69%	64%	86%	86%	87%	85%	79%	80%	60%	74%	69%	66%	76%
Temecula Valley Hospital	76%	71%	71%	87%	83%	84%	86%	86%	78%	63%	64%	76%	63%	76%
<b>Riverside County Compliance</b>	<b>77%</b>	<b>66%</b>	<b>69%</b>	<b>81%</b>	<b>85%</b>	<b>83%</b>	<b>80%</b>	<b>79%</b>	<b>74%</b>	<b>66%</b>	<b>69%</b>	<b>70%</b>	<b>70%</b>	<b>75%</b>

**APOT-1.** APOT-1 is an Ambulance Patient Offload Time interval measure of the 90<sup>th</sup> 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	2020		2021											Avg
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	APOT-1
Corona Regional Med Ctr	1:38	2:38	2:01	0:48	0:45	0:44	0:44	0:49	0:44	1:29	1:02	0:53	1:03	1:10
Desert Regional Med Ctr	0:30	0:41	0:37	0:30	0:34	0:32	0:40	0:31	0:29	0:48	0:42	0:40	0:33	0:35
Eisenhower Health	0:16	0:17	0:17	0:14	0:16	0:18	0:19	0:18	0:18	0:21	0:21	0:24	0:24	0:18
Hemet Valley Hospital	1:08	1:56	1:58	1:12	0:45	0:45	0:45	1:00	1:23	1:34	1:34	1:22	1:44	1:18
Inland Valley Med Ctr	0:38	1:21	1:17	0:43	0:33	0:35	0:37	0:43	1:04	1:31	1:21	1:20	1:11	0:59
JFK Hospital	0:15	0:20	0:19	0:16	0:18	0:16	0:17	0:18	0:17	0:17	0:17	0:18	0:16	0:17
Kaiser Hospital Moreno Valley	1:04	1:53	0:58	0:37	0:41	1:00	1:02	1:07	1:34	1:42	1:16	1:12	1:22	1:11
Kaiser Hospital Riverside	1:04	1:43	1:05	0:42	0:46	1:04	0:50	1:15	1:42	1:41	1:16	1:16	1:35	1:13
Loma Linda Univ Med Ctr Mur	0:44	1:10	1:09	0:50	0:48	0:49	0:57	0:54	1:17	2:04	1:20	1:26	0:56	1:06
Menifee Med Ctr	1:26	2:56	2:39	1:02	0:40	0:44	0:36	0:45	1:25	1:48	2:04	1:15	1:43	1:27
Palo Verde Hospital	0:17	0:21	0:20	0:14	0:11	0:14	0:13	0:14	0:14	0:14	0:15	0:23	0:21	0:16
Parkview Community Hospital	0:42	2:13	1:21	0:41	0:35	0:41	0:34	0:41	0:36	1:02	1:00	0:49	1:02	0:55
Rancho Springs Med Ctr	0:30	1:03	1:17	0:29	0:26	0:27	0:26	0:29	0:37	1:18	1:06	1:30	1:16	0:50
Riverside Comm Hospital	1:13	2:19	1:15	0:48	0:37	0:49	1:01	1:03	1:04	1:28	1:34	1:30	1:22	1:14
Riverside Univ Health System	0:36	0:42	0:35	0:29	0:29	0:29	0:31	0:30	0:35	0:39	0:38	0:34	0:35	0:34
San Geronio Mem Hospital	0:34	0:59	1:13	0:36	0:34	0:33	0:34	0:41	0:40	1:28	0:56	1:00	1:07	0:50
Temecula Valley Hospital	0:40	0:46	0:45	0:34	0:37	0:37	0:33	0:34	0:42	1:01	0:57	0:44	1:05	0:44
<b>Riverside County Compliance</b>	<b>0:49</b>	<b>1:20</b>	<b>1:03</b>	<b>0:40</b>	<b>0:35</b>	<b>0:38</b>	<b>0:41</b>	<b>0:44</b>	<b>0:50</b>	<b>1:11</b>	<b>1:03</b>	<b>1:01</b>	<b>1:03</b>	<b>0:53</b>

## AMBULANCE DIVERSIONS

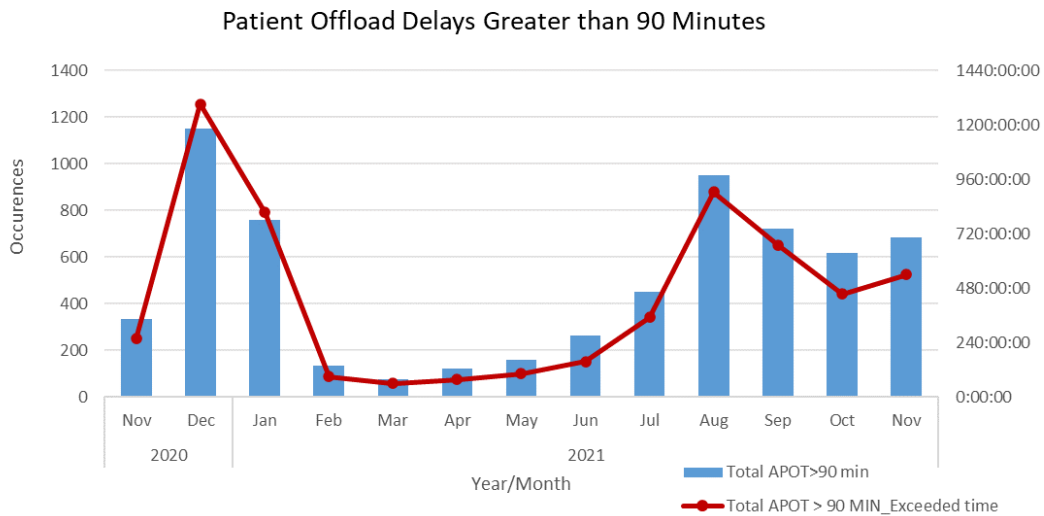
REMSA Policy 6103 (<https://www.remsa.us/policy/6103.pdf>) describes ground and air ambulance diversions to facilitate safe transport of patients to the closest alternate facility. Ambulance Diversions described here are those activated as a result of unusual circumstances at a facility limiting access 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		2020		2021									Total	
Diversion Category/Facility	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
<b>INT</b>			2		1	1	1	2		1	1	2	2	13
Corona Regional Medical Center												2		2
Desert Regional Medical Center											1		1	2
Menifee Valley Medical Center										1				1
Riverside Community Hospital						1								1
Inland Valley Medical Center			1		1								1	3
Loma Linda University Medical Center--Murrieta			1											1
Eisenhower Health						1								1
Palo Verde Hospital								2						2
<b>STEMI</b>			1						1		2		1	5
Desert Regional Medical Center											2		1	3
Riverside Community Hospital			1											1
Loma Linda University Medical Center--Murrieta									1					1
<b>Stroke</b>		2	1						1	1				5
Riverside Community Hospital			1											1
Rancho Springs Medical Center									1					1
Riverside University Health System		1								1				2
Parkview Community Hospital		1												1
<b>Trauma</b>	8	4	1	5	2	1	2	5	3	1	1	4	3	40
Riverside Community Hospital	3						1	1	1			2		8
Inland Valley Medical Center			1		1			2	1		1			6
Riverside University Health System	5	4		5	1	1	1	2	1	1		2	3	26
<b>Total</b>	<b>8</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>7</b>	<b>5</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>6</b>	<b>63</b>

Diversions by HH:MM		2020		2021									Total	
Diversion Category/Facility	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
<b>INT</b>			1:53		0:09	0:14	3:32	18:05		1:56	3:16	20:19	1:03	
Corona Regional Medical Center												20:19		
Desert Regional Medical Center											3:16			0:27
Menifee Valley Medical Center										1:56				
Riverside Community Hospital							3:32							
Inland Valley Medical Center			1:26		0:09									0:36
Loma Linda University Medical Center--Murrieta			0:27											
Eisenhower Health						0:14								
Palo Verde Hospital								18:05						
<b>STEMI</b>			2:01						4:11		13:42		0:19	
Desert Regional Medical Center											13:42			0:19
Riverside Community Hospital			2:01											
Loma Linda University Medical Center--Murrieta									4:11					
<b>Stroke</b>		5:27	2:02						0:17	0:01				
Riverside Community Hospital			2:02											
Rancho Springs Medical Center									0:17					
Riverside University Health System		0:08								0:01				
Parkview Community Hospital		5:19												
<b>Trauma</b>	9:20	1:31	2:03	8:15	2:42	0:51	1:48	7:58	9:52	0:11	0:53	2:23	4:36	
Riverside Community Hospital	2:40						0:51	3:42	5:01			1:03		
Inland Valley Medical Center			2:03		0:13			1:51	0:50		0:53			
Riverside University Health System	6:40	1:31		8:15	2:29	0:51	0:57	2:25	4:01	0:11		1:20	4:36	
<b>Total</b>	<b>9:20</b>	<b>6:58</b>	<b>7:59</b>	<b>8:15</b>	<b>2:51</b>	<b>1:05</b>	<b>5:20</b>	<b>26:03</b>	<b>14:20</b>	<b>2:08</b>	<b>17:51</b>	<b>22:42</b>	<b>5:58</b>	

## 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 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 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.

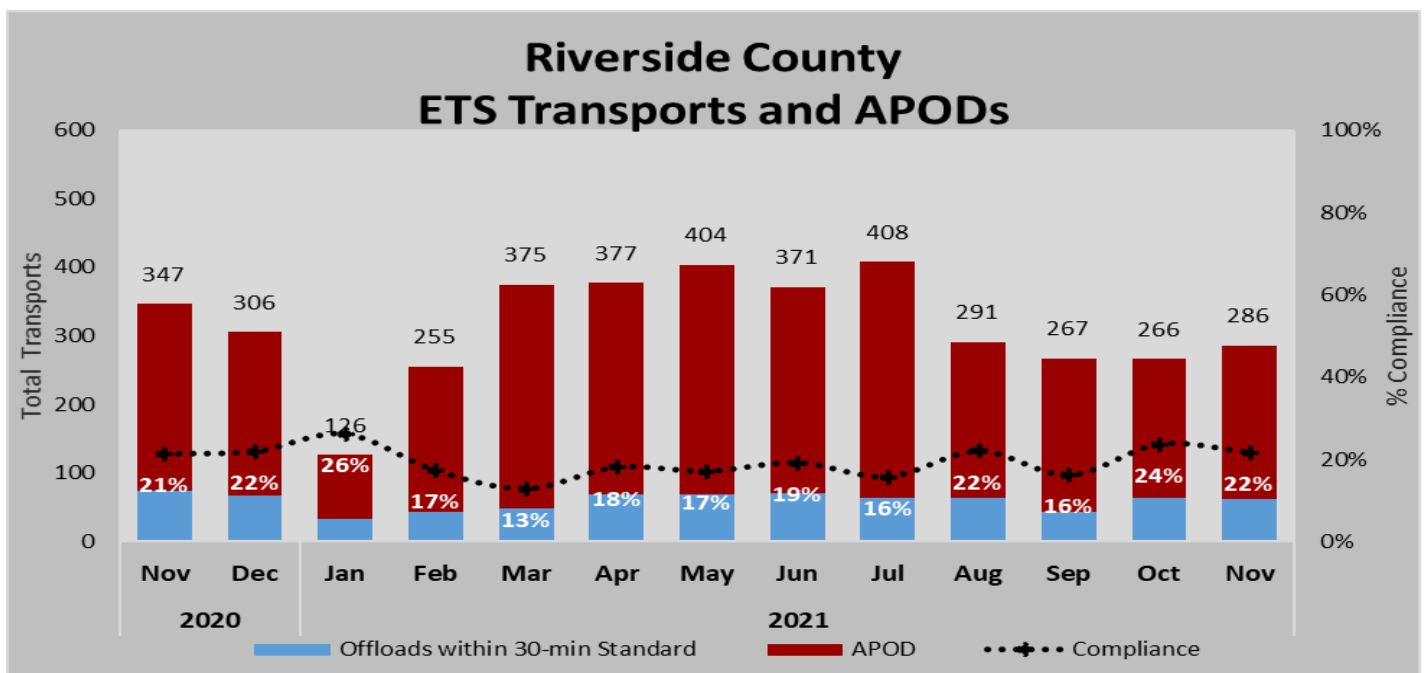
Facility	Total Time APOT>90 min (HR: MM: S)	Total Incidents APOT>90 min
Corona Regional Med Ctr	36:48:07	48
Desert Regional Med Ctr	18:04:40	23
Eisenhower Health	1:48:40	7
Hemet Valley Hospital	140:04:42	133
Inland Valley Med Ctr	28:09:14	50
JFK Hospital	0:43:01	2
Kaiser Hospital Moreno Valley	26:38:13	30
Kaiser Hospital Riverside	43:01:03	67
Loma Linda Univ Med Ctr Mur	21:00:56	28
Menifee Med Ctr	37:57:12	39
Palo Verde Hospital	0:07:23	1
Parkview Community Hospital	28:44:40	36
Rancho Springs Med Ctr	23:35:19	39
Riverside Community Hospital	97:35:48	120
Riverside University Health System	2:36:23	2
San Geronio Mem Hospital	22:20:51	35
Temecula Valley Hospital	10:31:22	23
<b>Grand Total</b>	<b>539:47:34</b>	<b>683</b>

# 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.

November 2021 - Emergency Treatment Services					
	Transports to ETS	Total Offload		APODs	APOD Compliance
		Time	APOD Hours		
Emergency Treatment Services	286	228:11:42	97:23:07	224	21.7%

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

## 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.<sup>1</sup> The Clock Start (eTimes.11) is the time of patient arrival at the destination (hospital), and the Clock Stop (eTimes.12) is time the care of the patient is transferred.<sup>2</sup> REMSA obtains both times from the ePCR.

## 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.”<sup>3</sup>

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

## 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.<sup>4</sup> If the transfer of care and patient offloading from the ambulance gurney exceeds the 30 minute standard, it will be documented and tracked as APOD.<sup>5</sup>

## APOD Compliance

A frequency comparison between the total number of transports and those resulting in APOD.

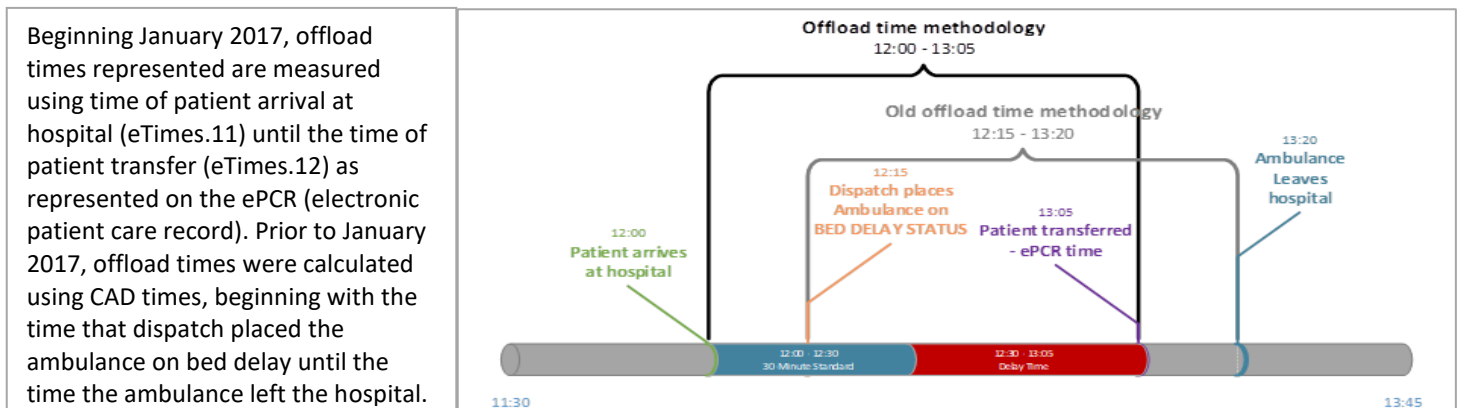
## 9-1-1 Ambulance Response

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. It excludes all records from First Responder Fire agencies arriving on scene as part of the dual 9-1-1 medical response system in Riverside County. It also excludes interfacility transports and other types of 9-1-1 responses such as air ambulance responses.

## Data Definitions

Data in this report includes all transports to the 17 hospitals monitored by REMSA in the respective month relative to the date and time the incident originates (eTimes.03--Dispatch Notified Date/Time). For example, if an incident originates on June 30, and the patient is subsequently transferred to the care of an emergency department on July 1, that incident will be included in the month of June.

Canceled calls, calls for which both arrival and transfer times are not present, and calls with erroneous/negative offload times are excluded. Certain incidents with offload times exceeding six hours and 12 hours are verified for accuracy, and incidents are excluded if the timeline cannot be validated.



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<sup>1</sup> Health and Safety Code Division 2.5, Chapter 3, Article 1, Section 1797.120(b)

<sup>2</sup> Ambulance Patient Offload Time (APOT) Standardized Methods for Data Collection and Reporting, approved by EMS Commission 12/14/2016.

<sup>3</sup> Ibid., APOT-1 Specifications.

<sup>4</sup> REMSA Policy 9101.6. <http://www.remsa.us/policy/9101.pdf>

<sup>5</sup> REMSA Policy 4204, Transfer of Patient Care. <http://www.remsa.us/policy/4204.pdf>