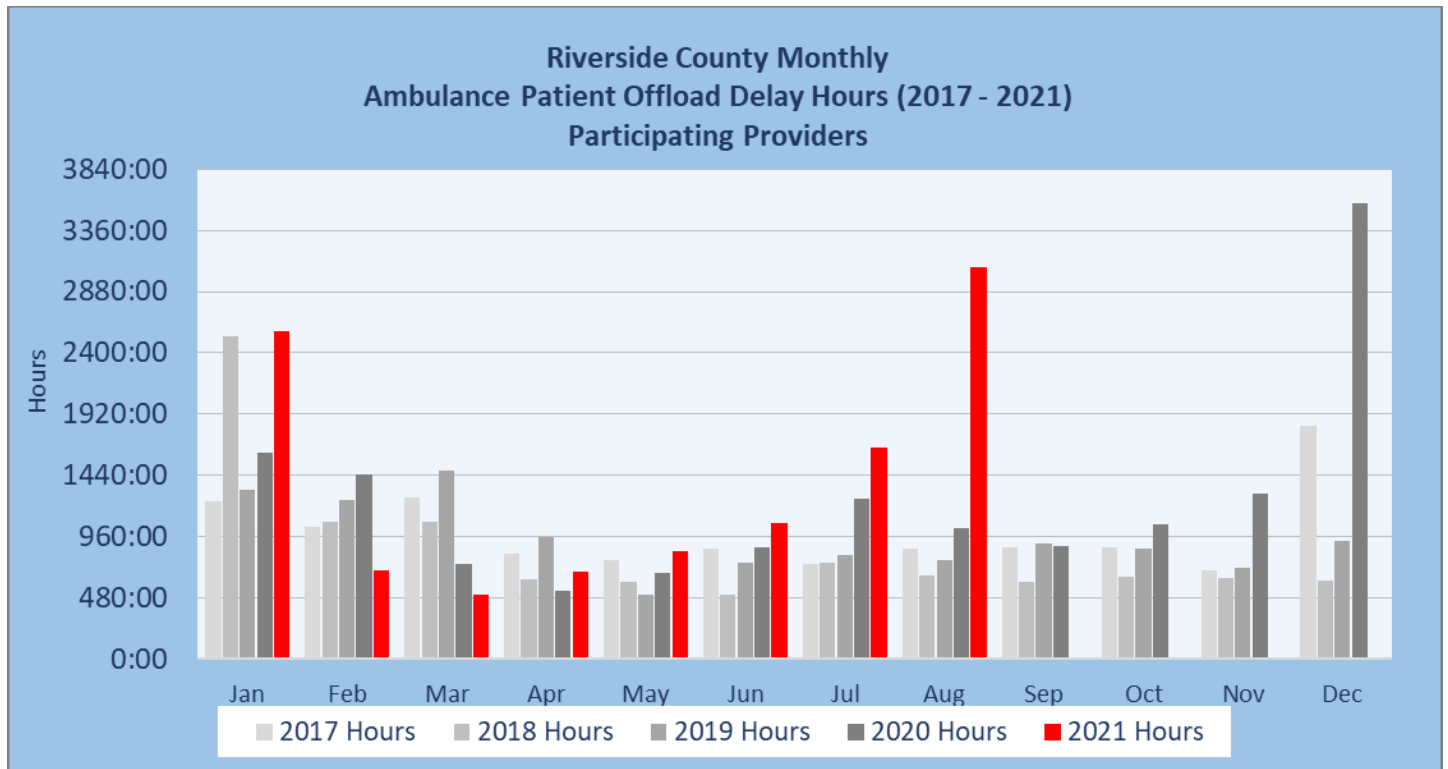# Ambulance Patient Offload Time

August 2021

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 has passed.
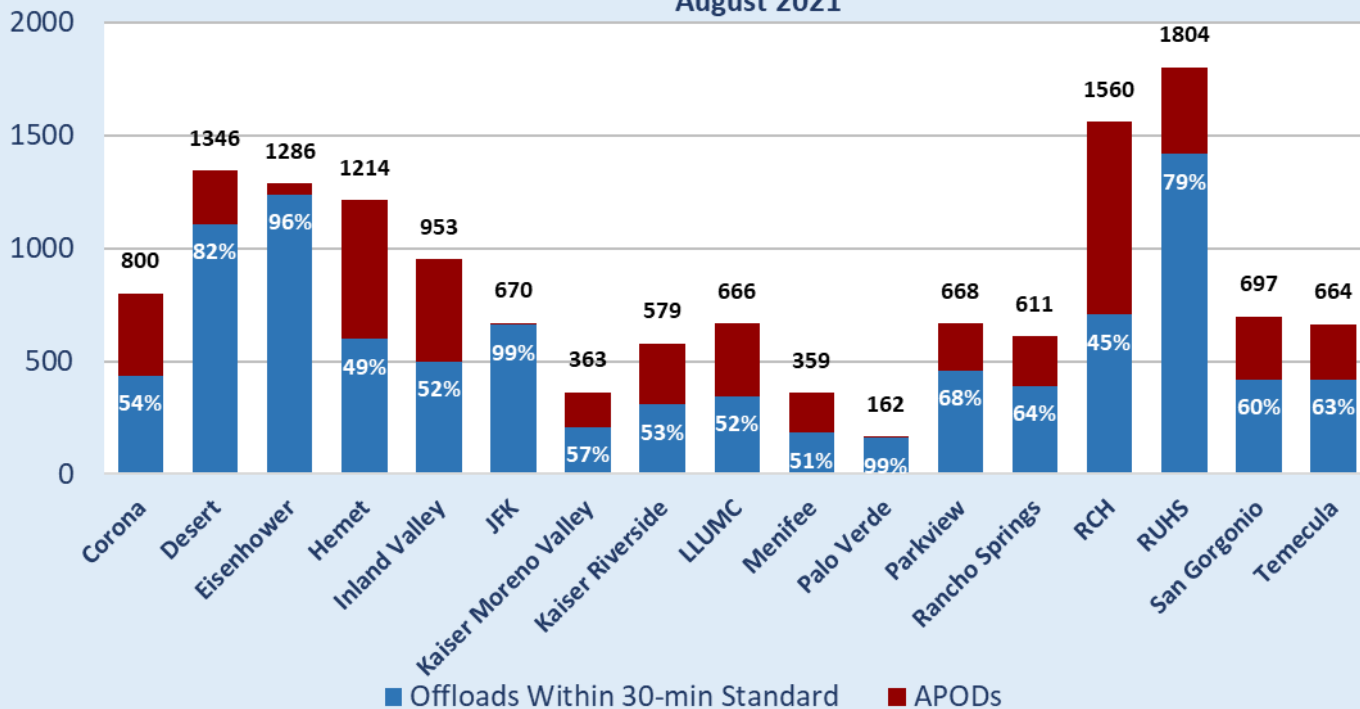

Riverside County Monthly Ambulance Patient Offload Delay Hours (2017 - 2021) Participating Providers

Legend: 2017 Hours, 2018 Hours, 2019 Hours, 2020 Hours, 2021 Hours

**Beginning August 2017, times represented include all participating providers. Prior to August, data included AMR responses only.
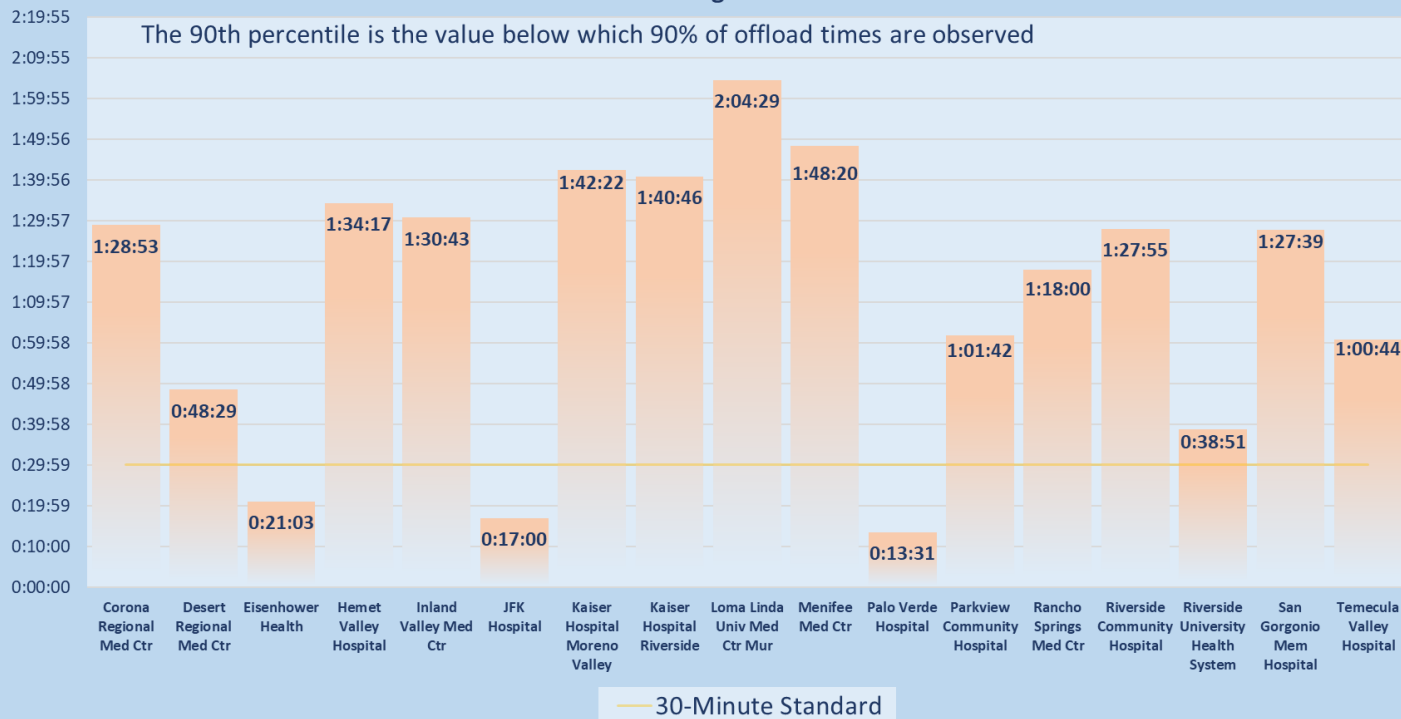
August 2021	ALS Transports	APOT	APOD Hours	APODs	APOD Compliance	APOT - 1
Corona Regional Med Ctr	800	548:53:48	241:56:09	365	54.4%	1:28:53
Desert Regional Med Ctr	1,346	485:41:56	151:12:53	237	82.4%	0:48:29
Eisenhower Health	1,286	252:45:51	16:54:28	49	96.2%	0:21:03
Hemet Valley Hospital	1,214	944:39:58	456:31:28	615	49.3%	1:34:17
Inland Valley Med Ctr	953	655:53:07	299:13:06	453	52.5%	1:30:43
JFK Hospital	670	92:52:22	2:37:36	9	98.7%	0:17:00
Kaiser Hospital Moreno Valley	363	275:56:59	143:41:23	156	57.0%	1:42:22
Kaiser Hospital Riverside	579	415:41:31	196:24:57	272	53.0%	1:40:46
Loma Linda Univ Med Ctr Mur	666	563:24:22	307:09:08	321	51.8%	**2:04:29**
Menifee Med Ctr	359	291:35:13	149:32:26	176	51.0%	1:48:20
Palo Verde Hospital	**162**	**15:51:00**	**0:02:25**	**2**	**98.8%**	**0:13:31**
Parkview Community Hospital	668	346:38:19	106:46:10	211	68.4%	1:01:42
Rancho Springs Med Ctr	611	368:07:22	155:00:08	219	64.2%	1:18:00
Riverside Community Hospital	1,560	**1119:36:13**	**484:17:17**	**854**	45.3%	1:27:55
Riverside University Health System	**1,804**	673:09:31	71:24:45	387	78.5%	0:38:51
San Gorgonio Mem Hospital	697	440:29:48	182:58:23	278	60.1%	1:27:39
Temecula Valley Hospital	664	353:36:50	105:40:57	246	63.0%	1:00:44
Grand Total	**14,402**	**7844:54:10**	**3071:23:39**	**4,850**	**66.3%**	**1:11:03**

Key High Low

Riverside County Hospitals
Transports, APODs and % Compliance
August 2021

Legend: ■ Offloads Within 30-min Standard ■ APODs

Data values by hospital (Total transports, % compliance):
- Corona: 800, 54%
- Desert: 1346, 82%
- Eisenhower: 1286, 96%
- Hemet: 1214, 49%
- Inland Valley: 953, 52%
- JFK: 670, 99%
- Kaiser Moreno Valley: 363, 57%
- Kaiser Riverside: 579, 53%
- LLUMC: 666, 52%
- Menifee: 359, 51%
- Palo Verde: 162, 99%
- Parkview: 668, 68%
- Rancho Springs: 611, 64%
- RCH: 1560, 45%
- RUHS: 1804, 79%
- San Gorgonio: 697, 60%
- Temecula: 664, 63%

Riverside County Hospitals
APOT-1, 90th Percentile
August 2021

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

Values by hospital:
- Corona Regional Med Ctr: 1:28:53
- Desert Regional Med Ctr: 0:48:29
- Eisenhower Health: 0:21:03
- Hemet Valley Hospital: 1:34:17
- Inland Valley Med Ctr: 1:30:43
- JFK Hospital: 0:17:00
- Kaiser Hospital Moreno Valley: 1:42:22
- Kaiser Hospital Riverside: 1:40:46
- Loma Linda Univ Med Ctr Mur: 2:04:29
- Menifee Med Ctr: 1:48:20
- Palo Verde Hospital: 0:13:31
- Parkview Community Hospital: 1:01:42
- Rancho Springs Med Ctr: 1:18:00
- Riverside Community Hospital: 1:27:55
- Riverside University Health System: 0:38:51
- San Gorgonio Mem Hospital: 1:27:39
- Temecula Valley Hospital: 1:00:44

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.
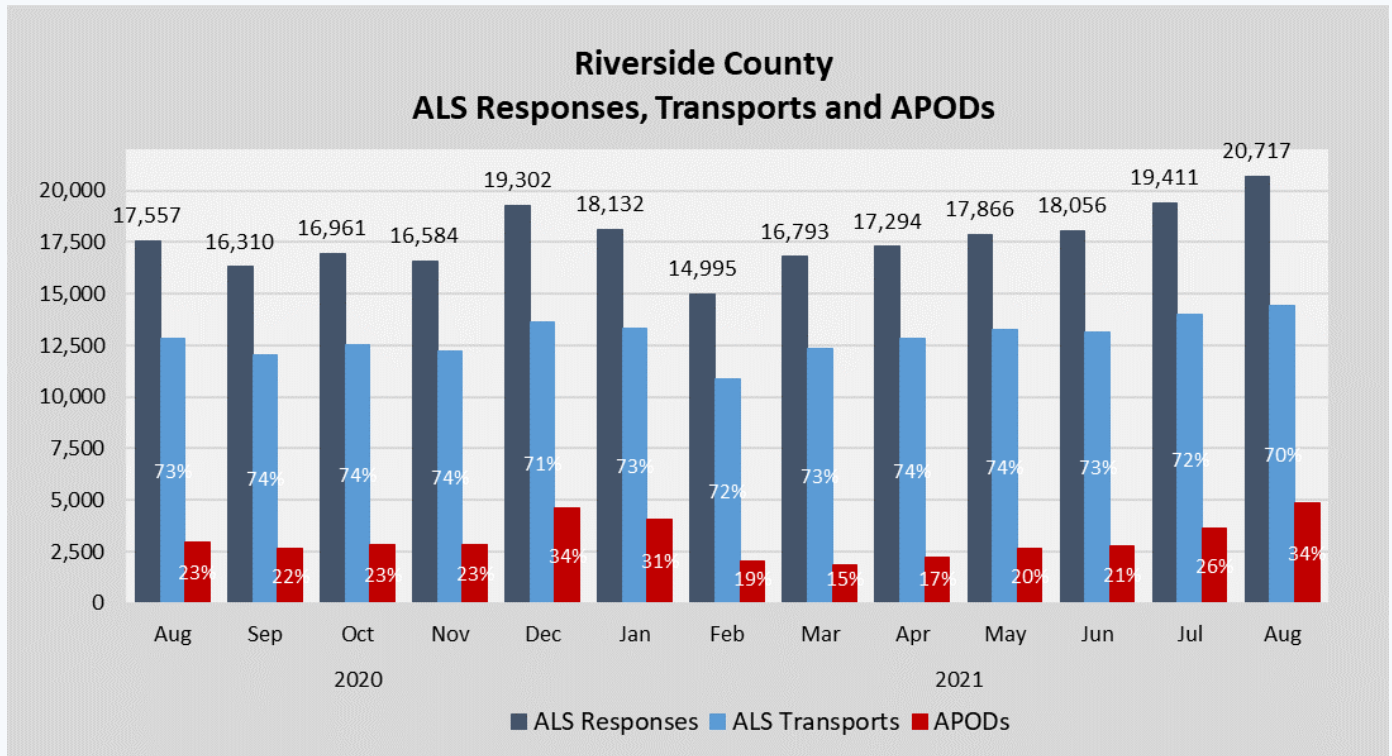
TRANSPORT VOLUME.

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	2020					2021							Aug	Monthly Avg
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Avg
Corona Regional Med Ctr	729	642	720	638	700	683	606	680	625	757	747	832	800	705
Desert Regional Med Ctr	1122	1070	1122	1090	1126	1174	969	1242	1406	1417	1395	1424	1346	1,223
Eisenhower Health	1134	1098	1142	1148	1284	1302	1051	1272	1273	1220	1112	1187	1286	1,193
Hemet Valley Hospital	1406	1230	1322	1318	1130	1085	1006	1229	1286	1339	1302	1256	1214	1,240
Inland Valley Med Ctr	869	870	824	808	914	806	733	829	847	943	910	946	953	866
JFK Hospital	620	573	603	579	705	618	520	574	577	639	627	639	670	611
Kaiser Hospital Moreno Valley	317	286	309	300	390	400	266	308	310	263	309	342	363	320
Kaiser Hospital Riverside	531	521	561	582	674	642	459	507	505	523	540	517	579	549
Loma Linda Univ Med Ctr Mur	634	591	642	642	709	714	546	630	589	652	639	730	666	645
Menifee Med Ctr	292	239	270	273	324	274	204	237	249	241	269	341	359	275
Palo Verde Hospital	148	137	139	159	154	169	128	110	147	148	143	169	162	147
Parkview Community Hospital	523	517	543	538	713	565	384	442	487	537	526	630	668	544
Rancho Springs Med Ctr	461	416	414	412	552	586	449	454	462	503	500	536	611	489
Riverside Comm Hospital	1494	1422	1376	1311	1217	1405	1242	1406	1552	1456	1511	1546	1560	1,423
Riverside Univ Health System	1445	1395	1420	1409	1732	1643	1240	1388	1421	1514	1476	1607	1804	1,500
San Gorgonio Mem Hospital	569	557	563	530	737	669	541	507	577	566	602	640	697	597
Temecula Valley Hospital	530	490	535	484	563	586	504	505	537	525	539	631	664	546
Riverside County Total	12824	12054	12505	12221	13624	13321	10848	12320	12850	13243	13147	13973	14402	12872

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

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

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 | 2020 | | | | | | | | | | | | 2021 | Avg APOT-1 |
Hospital	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Avg APOT-1
Corona Regional Med Ctr	0:52	0:51	0:55	1:38	2:38	2:01	0:48	0:45	0:44	0:44	0:49	0:44	1:29	1:09
Desert Regional Med Ctr	0:27	0:25	0:29	0:30	0:41	0:37	0:30	0:34	0:32	0:40	0:31	0:29	0:48	0:33
Eisenhower Health	0:19	0:15	0:16	0:16	0:17	0:17	0:14	0:16	0:18	0:19	0:18	0:18	0:21	0:17
Hemet Valley Hospital	1:04	0:51	0:54	1:08	1:56	1:58	1:12	0:45	0:45	0:45	1:00	1:23	1:34	1:10
Inland Valley Med Ctr	0:43	0:43	0:48	0:38	1:21	1:17	0:43	0:33	0:35	0:37	0:43	1:04	1:31	0:52
JFK Hospital	0:15	0:15	0:16	0:15	0:20	0:19	0:16	0:18	0:16	0:17	0:18	0:17	0:17	0:16
Kaiser Hospital Moreno Valley	0:56	0:52	0:54	1:04	1:53	0:58	0:37	0:41	1:00	1:02	1:07	1:34	1:42	1:06
Kaiser Hospital Riverside	0:41	0:49	0:46	1:04	1:43	1:05	0:42	0:46	1:04	0:50	1:15	1:42	1:41	1:05
Loma Linda Univ Med Ctr Mur	0:44	0:38	0:39	0:44	1:10	1:09	0:50	0:48	0:49	0:57	0:54	1:17	2:04	0:58
Menifee Med Ctr	1:07	0:48	1:05	1:26	2:56	2:39	1:02	0:40	0:44	0:36	0:45	1:25	1:48	1:18
Palo Verde Hospital	0:10	0:12	0:15	0:17	0:21	0:20	0:14	0:11	0:14	0:13	0:14	0:14	0:14	0:14
Parkview Community Hospital	0:58	0:54	0:42	0:42	2:13	1:21	0:41	0:35	0:41	0:34	0:41	0:36	1:02	0:53
Rancho Springs Med Ctr	0:30	0:30	0:32	0:30	1:03	1:17	0:29	0:26	0:27	0:26	0:29	0:37	1:18	0:39
Riverside Comm Hospital	1:00	1:07	1:14	1:13	2:19	1:15	0:48	0:37	0:49	1:01	1:03	1:04	1:28	1:09
Riverside Univ Health System	0:35	0:32	0:36	0:36	0:42	0:35	0:29	0:29	0:29	0:31	0:30	0:35	0:39	0:33
San Gorgonio Mem Hospital	0:28	0:36	0:33	0:34	0:59	1:13	0:36	0:34	0:33	0:34	0:41	0:40	1:28	0:43
Temecula Valley Hospital	0:36	0:43	0:39	0:40	0:46	0:45	0:34	0:37	0:37	0:33	0:34	0:42	1:01	0:40
Riverside County Compliance	0:45	0:44	0:45	0:49	1:20	1:03	0:40	0:35	0:38	0:41	0:44	0:50	1:11	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	2020					2021								Total
Diversion Category/Facility	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
INT		5	8			2		1	1	1	2		1	21
Corona Regional Medical Center		1												1
Menifee Valley Medical Center			1										1	2
Riverside Community Hospital		1							1					2
Temecula Valley Hospital		1												1
Inland Valley Medical Center		2				1		1						4
Loma Linda University Medical Center--Murrieta		3				1								4
Rancho Springs Medical Center		4												4
Eisenhower Health									1					1
Palo Verde Hospital											2			2
STEMI	1	2	1			1						1		6
Riverside Community Hospital		1				1								2
Temecula Valley Hospital		1												1
Loma Linda University Medical Center--Murrieta	1		1									1		3
Stroke		4	3	2	1							1	1	12
Corona Regional Medical Center		1	1											2
Riverside Community Hospital		1			1									2
Temecula Valley Hospital		1												1
Inland Valley Medical Center		1												1
Rancho Springs Medical Center			2									1		3
Riverside University Health System				1									1	2
Parkview Community Hospital				1										1
Trauma	6	5	1	8	4	1	5	2	1	2	5	3	1	44
Riverside Community Hospital	1	1		3						1	1	1		8
Inland Valley Medical Center	2	2	1			1		1			2	1		10
Riverside University Health System	3	2		5	4		5	1	1	1	2	1	1	26
Total	7	16	13	8	6	5	5	3	2	3	7	5	3	83

Diversions by HH:MM	2020					2021							Aug
Diversion Category/Facility	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
INT		96:38	15:02			1:53		0:09	0:14	3:32	18:05		1:56
Corona Regional Medical Center		59:44											
Menifee Valley Medical Center			0:25										1:56
Riverside Community Hospital		2:08								3:32			
Temecula Valley Hospital		29:51											
Inland Valley Medical Center		4:55				1:26		0:09					
Loma Linda University Medical Center--Murrieta			1:59			0:27							
Rancho Springs Medical Center			12:38										
Eisenhower Health									0:14				
Palo Verde Hospital											18:05		
STEMI	1:30	192:30	1:26			2:01						4:11	
Riverside Community Hospital		2:02				2:01							
Temecula Valley Hospital		190:28											
Loma Linda University Medical Center--Murrieta	1:30		1:26									4:11	
Stroke		83:00	27:53		5:27	2:02						0:17	0:01
Corona Regional Medical Center		71:58	10:57										
Riverside Community Hospital		2:02				2:02							
Temecula Valley Hospital		1:47											
Inland Valley Medical Center		7:13											
Rancho Springs Medical Center			16:56									0:17	
Riverside University Health System					0:08								0:01
Parkview Community Hospital					5:19								
Trauma	7:53	7:22	2:01	9:20	1:31	2:03	8:15	2:42	0:51	1:48	7:58	9:52	0:11
Riverside Community Hospital	2:53	2:00		2:40						0:51	3:42	5:01	
Inland Valley Medical Center	2:09	3:44	2:01			2:03		0:13			1:51	0:50	
Riverside University Health System	2:51	1:38		6:40	1:31		8:15	2:29	0:51	0:57	2:25	4:01	0:11
Total	9:23	379:30	46:22	9:20	6:58	7:59	8:15	2:51	1:05	5:20	26:03	14:20	2:08

APOD AMBULANCE REDIRECTION

REMSA Policy 6104 (http://www.remsa.us/policy/6104.pdf) allows redirection of ambulances from hospitals experiencing extended Ambulance Patient Offload Delay (APOD) to the closest most appropriate hospital. Extended APOD is defined as a patient remaining on an ambulance gurney for **90 minutes or greater** after arrival at a hospital. The table below shows the total number of ambulance redirections by hospital for the current month and a rolling 12 months prior.

Facilities	2020					2021								Total Redirection
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
Corona Regional Medical Center	5	7	8	31	91	61	5	1	3	3	7	7	44	273
Desert Regional Medical Center	2	1	5	3	8	14	3	6	5	13	8	7	32	107
Eisenhower Health						1				1			4	6
Hemet Valley Medical Center	16	4	4	20	87	86	31	1	9	1	14	56	86	415
Inland Valley Medical Center	2	2	7	3	32	45	5		2	1	5	23	63	190
John F. Kennedy Memorial Hospital										1			1	2
Kaiser Hospital Moreno Valley	2	1	1	8	34	16	1	3	8	4	7	19	30	134
Kaiser Hospital Riverside		4	3	7	63	25	1	4	6	7	18	40	57	235
Loma Linda Univ Med Ctr Murrieta	2	2	2	3	32	38	6	3	7	11	12	26	65	209
Menifee Valley Medical Center	5	2	8	16	68	43	6	1		1	2	14	41	207
Palo Verde Hospital					1	1								2
Parkview Community Hospital	14	4	2	1	77	41	1		1	1	2	1	20	165
Rancho Springs Medical Center		1		15	24							5	37	82
Riverside Community Hospital	13	21	35	37	131	46	3		2	26	21	24	74	433
Riverside University Health System		1		6								1	1	9
San Gorgonio Memorial Hospital				1	11	19	2					3	38	74
Temecula Valley Hospital		2			7	6		1		1		1	11	29
Total Redirection	61	50	77	130	663	466	64	20	43	71	96	227	604	2572

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.

August 2021 - Emergency Treatment Services					
	Transports to ETS	Total Offload Time	APOD Hours	APODs	APOD Compliance
Emergency Treatment Services	291	246:06:44	115:08:27	227	22.0%

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.
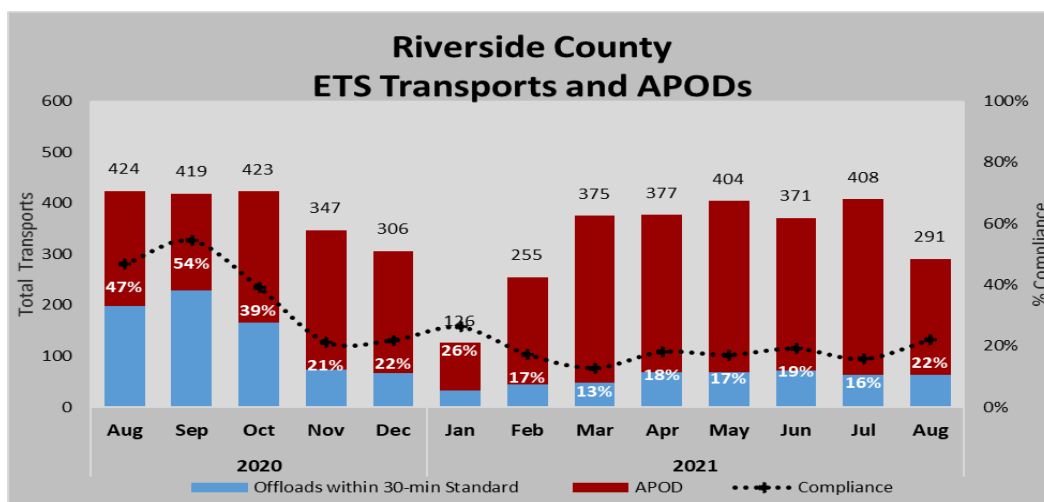
APOT AND APOD DEFINITIONS

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.[1] 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.[2] 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."[3]
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 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 offloading from the ambulance gurney exceeds the 30 minute standard, it will be documented and tracked as APOD.[5]

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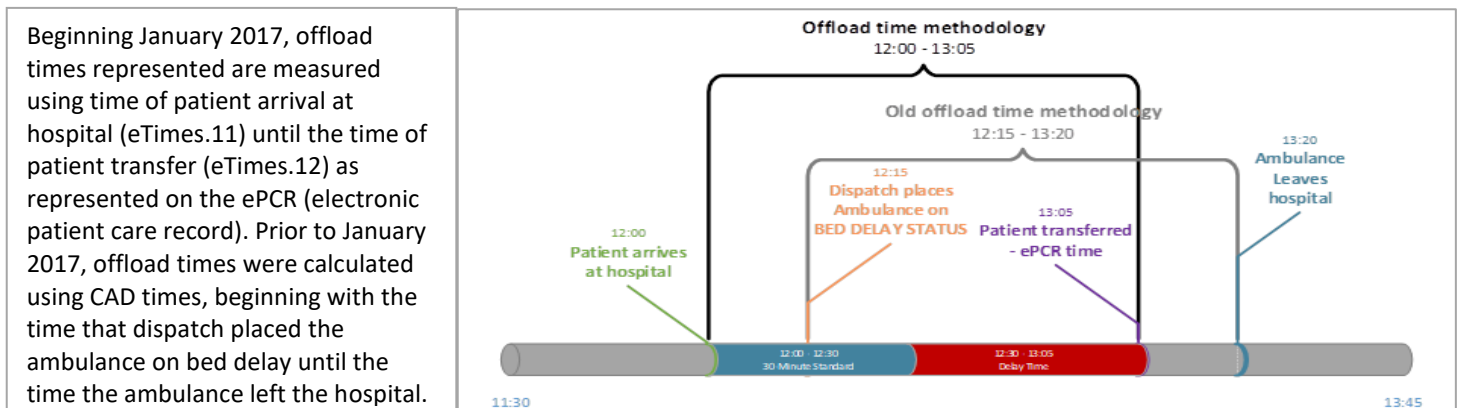A frequency comparison between the total number of transports and those resulting in APOD.

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.

Beginning January 2017, offload times represented are measured using time of patient arrival at hospital (eTimes.11) until the time of patient transfer (eTimes.12) as represented on the ePCR (electronic patient care record). Prior to January 2017, offload times were calculated using CAD times, beginning with the time that dispatch placed the ambulance on bed delay until the time the ambulance left the hospital.

-For inquiries, please contact Riverside County EMS Agency EMS Administrator, TDouville@rivco.org
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[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.
[3] Ibid., APOT-1 Specifications.
[4] REMSA Policy 9101.6. http://www.remsa.us/policy/9101.pdf
[5] REMSA Policy 4204, Transfer of Patient Care. http://www.remsa.us/policy/4204.pdf