Special Seasonal Report

Ambulance Patient Offload Time

Week 52 (12/20/20 – 12/26/20)

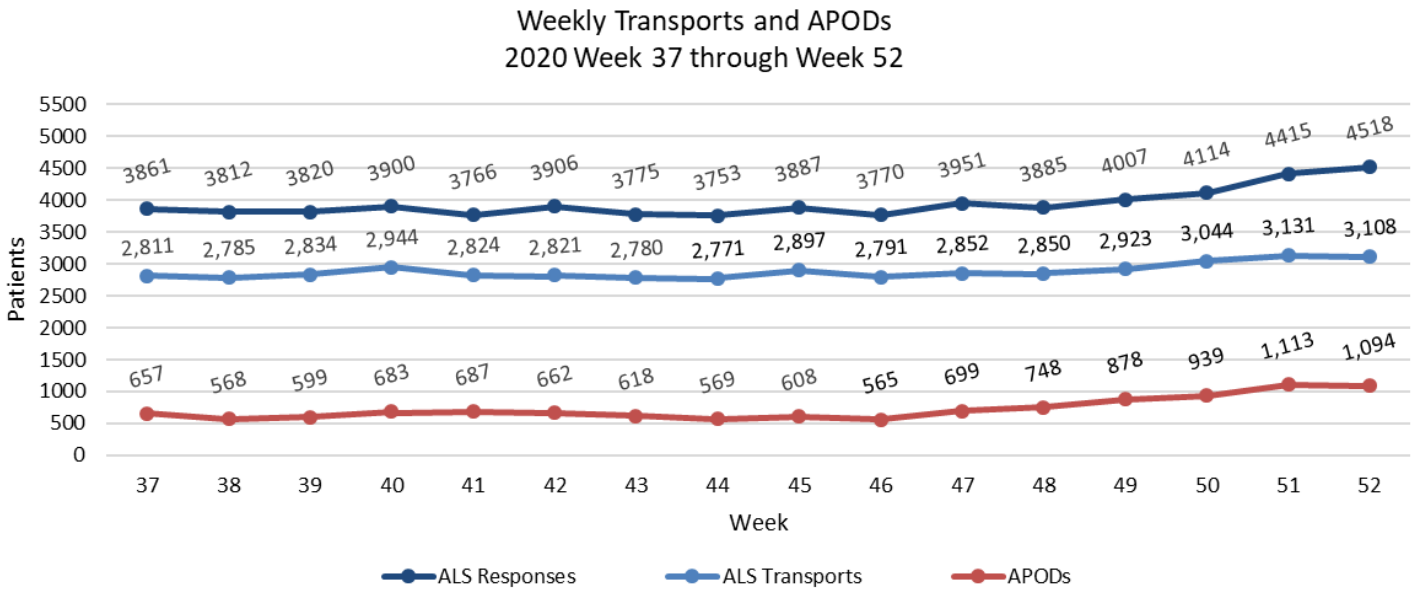
2020-21 Seasonal Report

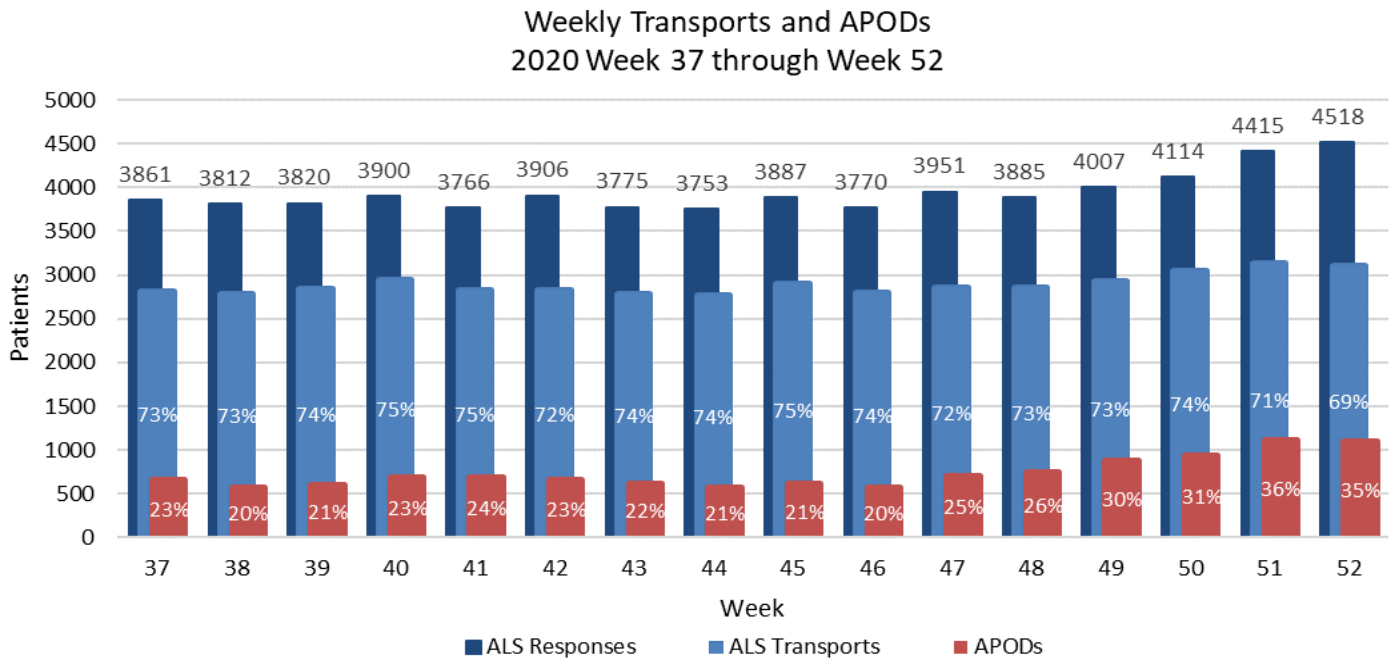
This report and all current and recent APOT reports can be found online at:
http://www.rivcoems.org/Documents/Reports-Current

Prepared by Riverside County EMS Agency – December 29, 2020

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 charts represent weekly aggregates of 9-1-1 Ambulance (ALS) Responses, Transports, and Ambulance Patient Offload Delays (APOD) for the past 16 weeks.

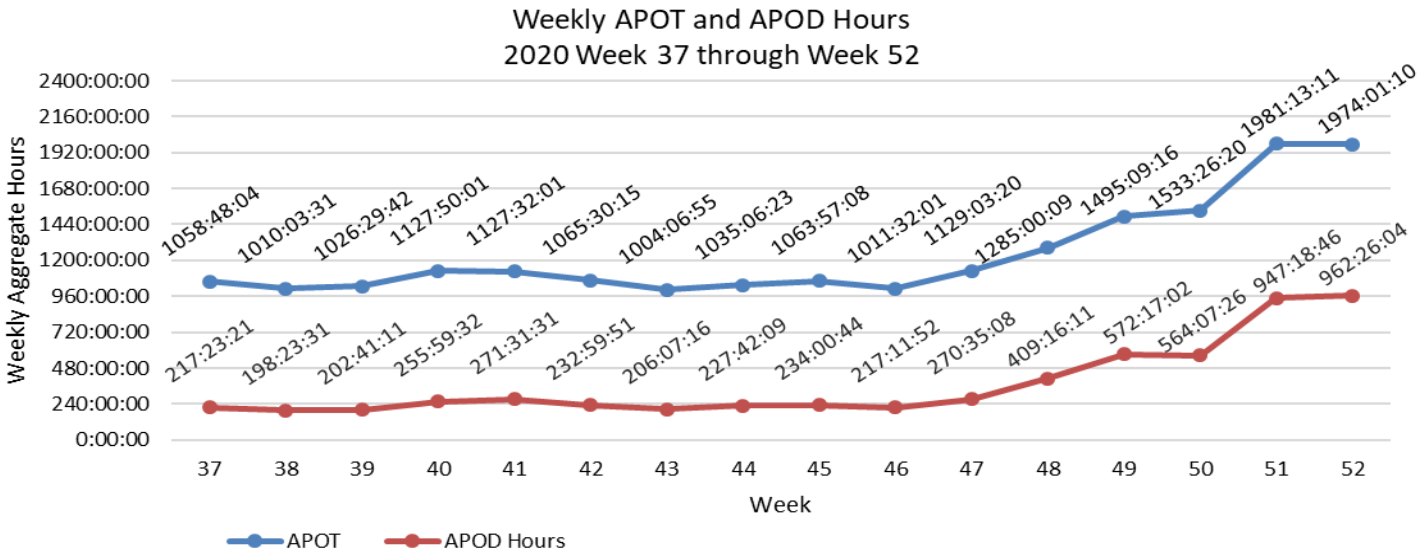




- During Week 52, there were a total of **4,518 ALS responses** in Riverside County— 2.3% INCREASE from the previous week's total of 4,415 responses.
- During Week 52, there were a total of **3,108 transports** in Riverside County— 0.7% DECREASE from the previous week's 3,131 transports.
- During Week 52, there were a total of **1,094 APODs** in Riverside County— 1.7% BELOW the previous week's total of 1,113 APODs.

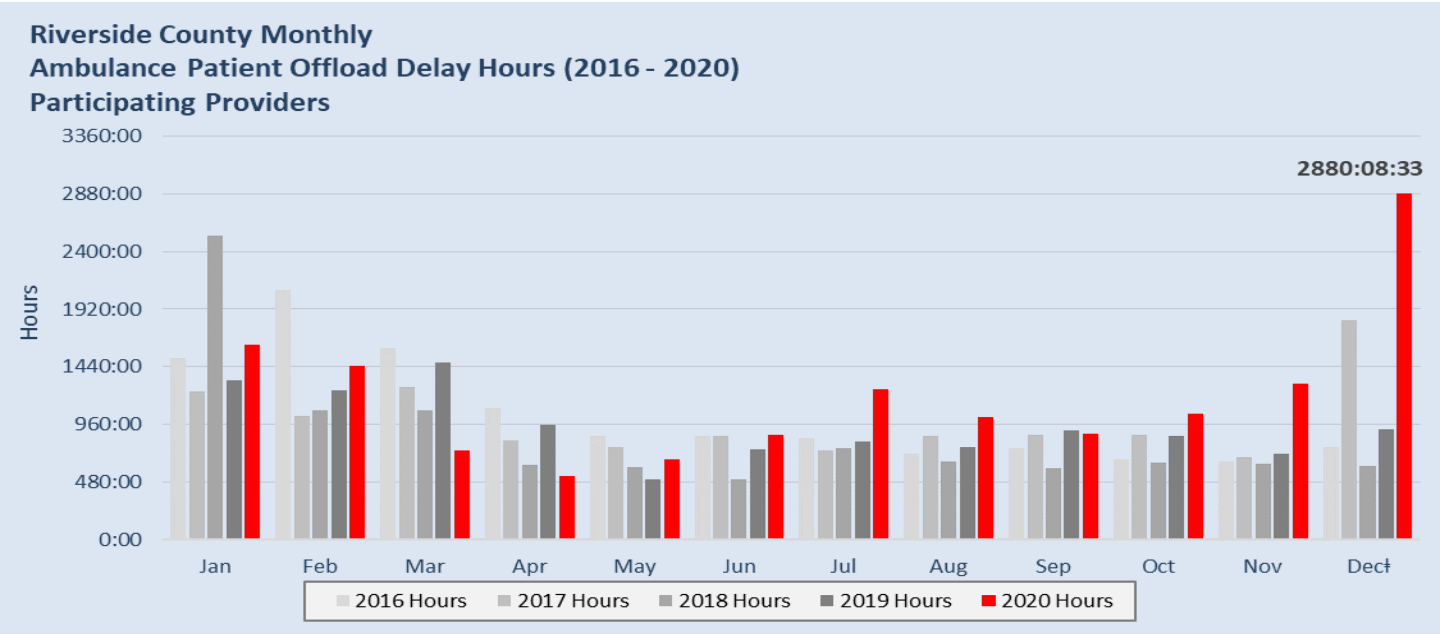
RIVERSIDE COUNTY AMBULANCE PATIENT OFFLOAD TIME

The following chart represent weekly aggregate APOT and 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 4204.



- During 2020 Week 52, **APOT county-wide totaled 1974.0 hours** — 0.4% BELOW the previous week's total of 1981.2 hours.
- County-wide **APOD hours for Week 52 totaled 962.4 hours**, a 1.6% INCREASE from the previous week's total of 947.3 hours.

The data provided below illustrates 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.



** Prior to January 2017, offload times were calculated using CAD times, beginning with the time that dispatch placed the ambulance on bed delay status until the time the ambulance left the hospital.*

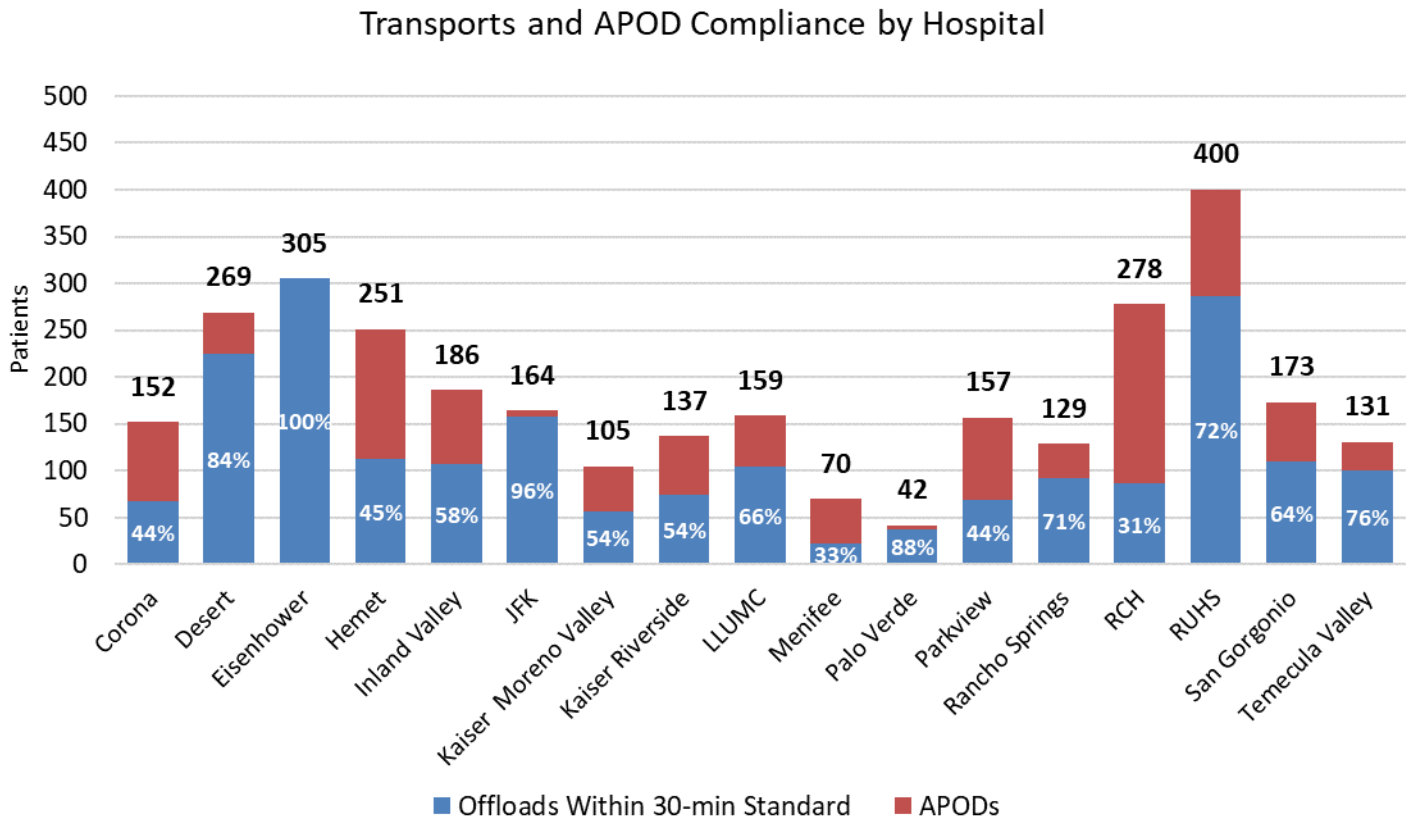
***Beginning August 2017, times represented include all participating providers. Prior to August, data included AMR responses only.*

‡Dec 2020 ***is a partial month***

AMBULANCE PATIENT OFFLOAD TIME BY HOSPITAL

Key: **High** | **Low/Best**

	APOT Snapshot				
	ALS Transports	APOT	APOD Hours	APODs	APOD Compliance
Corona Regional Med Ctr	152	151:11:54	88:49:05	85	44.1%
Desert Regional Med Ctr	269	95:07:50	32:19:10	44	83.6%
Eisenhower Health	305	45:47:29	**0:00:00**	**0**	**100.0%**
Hemet Valley Hospital	251	220:57:51	119:17:35	139	44.6%
Inland Valley Med Ctr	186	121:55:27	54:36:33	79	57.5%
JFK Hospital	164	27:35:13	2:37:10	6	96.3%
Kaiser Hospital Moreno Valley	105	88:49:29	50:01:00	48	54.3%
Kaiser Hospital Riverside	137	110:33:55	59:30:26	63	54.0%
Loma Linda Univ Med Ctr Mur	159	98:27:49	45:10:51	54	66.0%
Menifee Med Ctr	70	96:39:00	67:24:15	47	32.9%
Palo Verde Hospital	**42**	**8:05:54**	2:33:32	5	88.1%
Parkview Community Hospital	157	186:36:56	122:35:34	88	43.9%
Rancho Springs Med Ctr	129	72:44:01	29:33:23	37	71.3%
Riverside Community Hospital	278	**333:12:38**	**217:14:18**	**192**	**30.9%**
Riverside University Health System	**400**	167:57:54	27:42:30	113	71.8%
San Gorgonio Mem Hospital	173	97:16:47	35:27:57	63	63.6%
Temecula Valley Hospital	131	51:01:03	7:32:45	31	76.3%
Totals	**3,108**	**1974:01:10**	**962:26:04**	**1,094**	**64.8%**

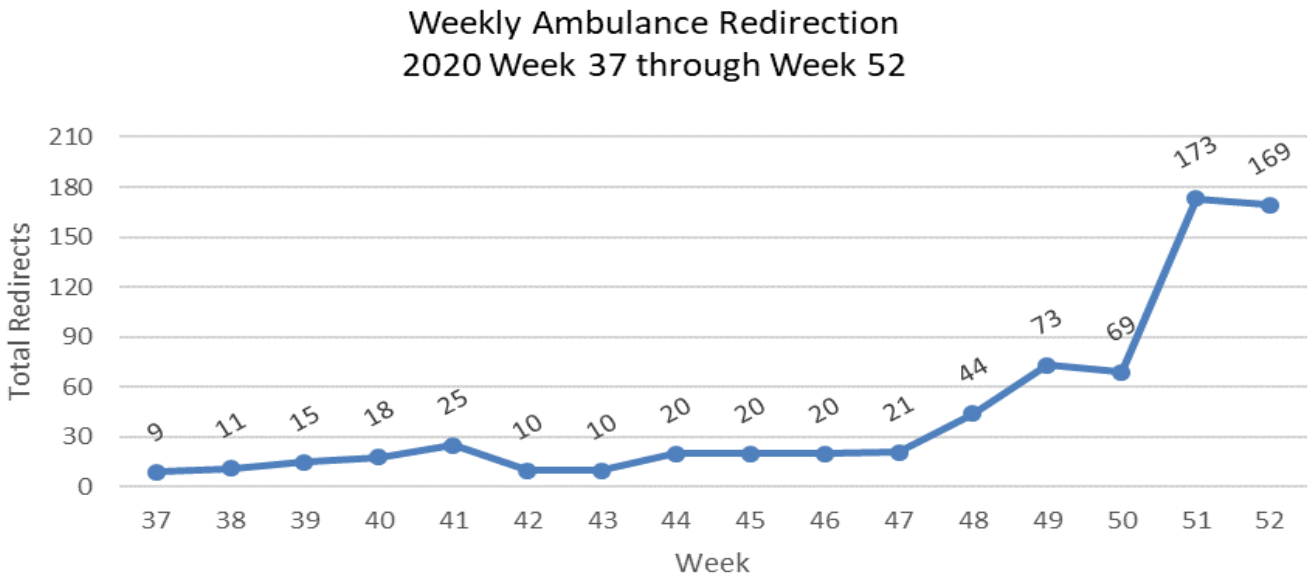


AMBULANCE REDIRECTION

On October 1, 2019, Riverside County EMS Agency activated Policy 6104 (http://www.remsa.us/policy/6104.pdf) to allow redirection of ambulances from hospitals that have extended Ambulance Patient Offload Delay (APOD)--to the closest most appropriate hospital that does not have extended APOD. Extended APOD is a patient remaining on an ambulance gurney for 90 minutes or greater after arrival at a hospital. The table below shows the ambulance diversions that occurred during Week 52.

	Occurrences of APOD Redirection
Corona Regional Medical Center	22
Desert Regional Medical Center	5
Hemet Valley Medical Center	18
Inland Valley Medical Center	7
Kaiser Permanente Moreno Valley Medical Center	8
Kaiser Permanente Riverside Medical Center	17
Loma Linda University Medical Center--Murrieta	6
Menifee Valley Medical Center	19
Parkview Community Hospital	23
Rancho Springs Medical Center	4
Riverside Community Hospital	33
Riverside University Health System	1
San Gorgonio Memorial Hospital	5
Temecula Valley Hospital	1
Grand Total	**169**

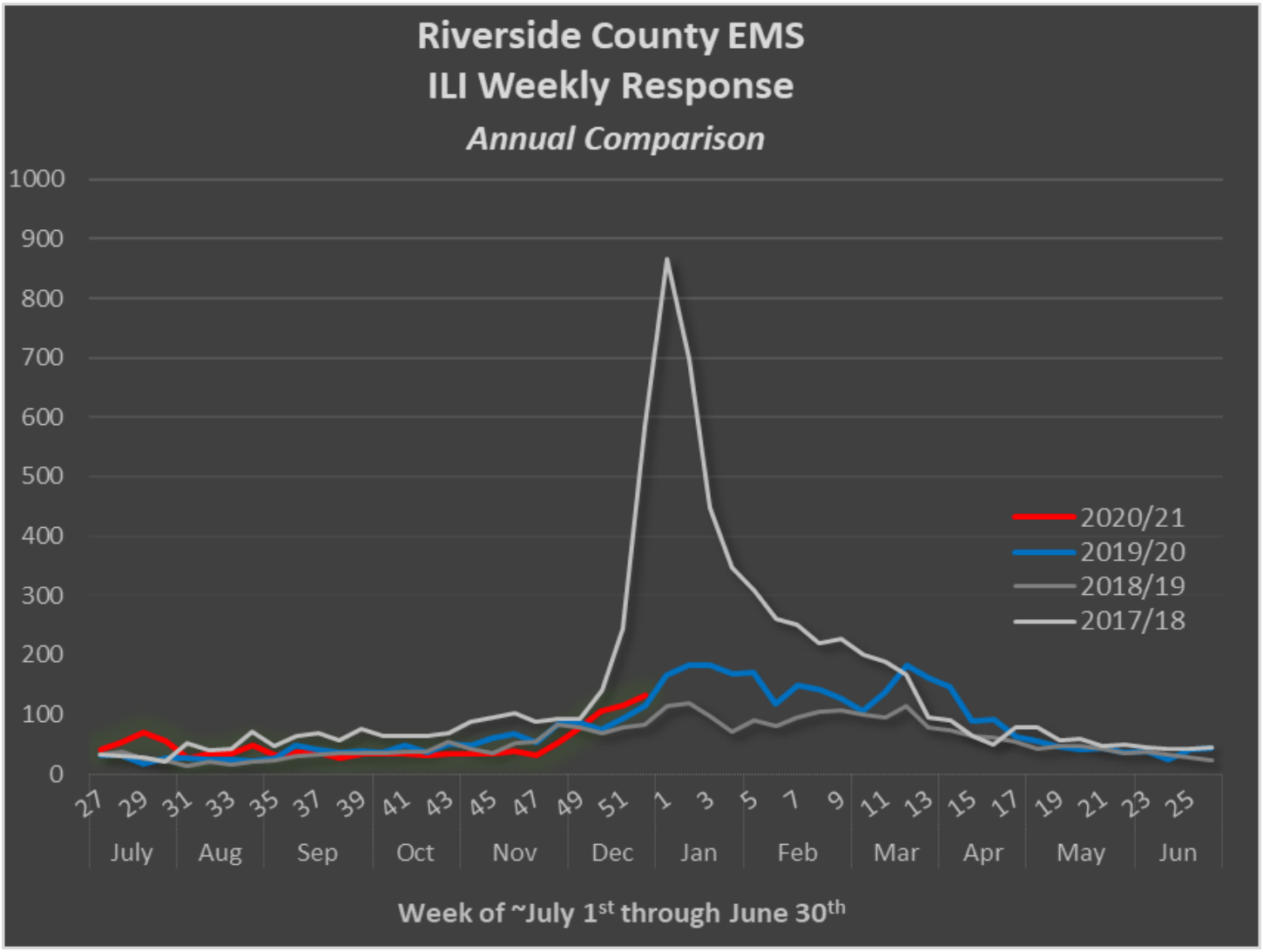
During Week 52, there were a total of **169 ALS Redirection** in Riverside County— 2.3% DECREASE from the previous week's total of 173 redirects.



ILI - INFLUENZA-LIKE ILLNESS RESPONSE

While influenza viruses are detected year-round, they are most common during fall and winter. Increases in influenza-like-illness (ILI) generally begin in October and peak sometime between December and February (https://www.cdc.gov/flu/about/season/flu-season.htm).

Hospital Emergency Departments (EDs) generally experience an increase in volume during flu season which, in turn, can impact Ambulance Patient Offload Time. The purpose of the Riverside County EMS system ILI (Influenza-like Illness) 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.

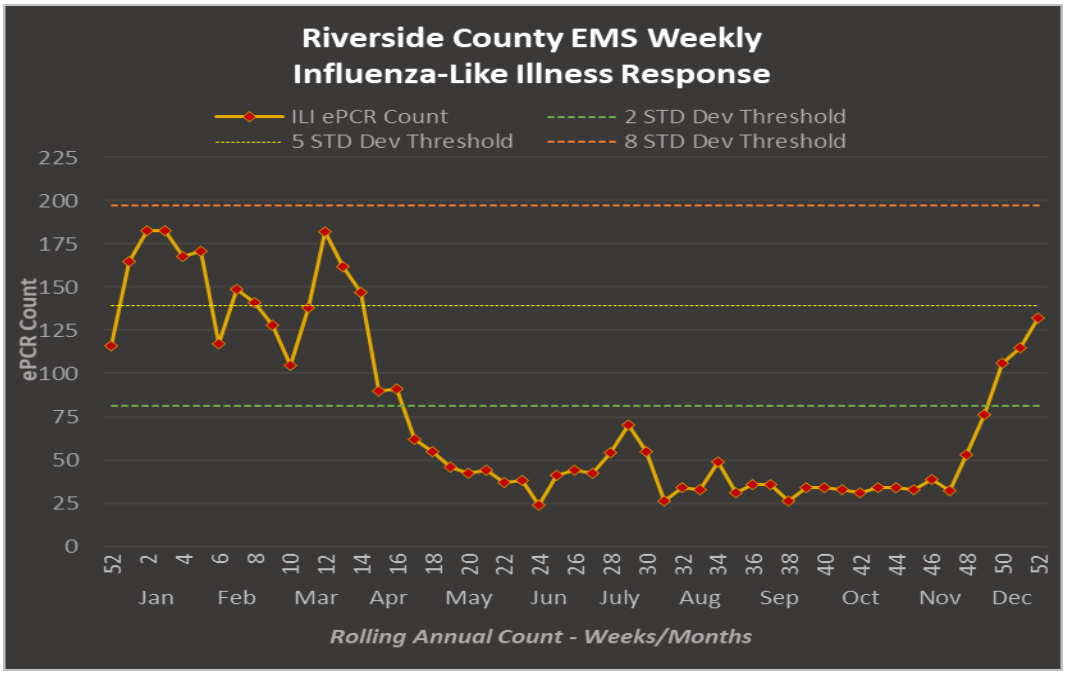
ILI - INFLUENZA-LIKE ILLNESS RESPONSE *(CONT.)*

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

1. Filters primary or secondary impression of code J11 (Influenza due to unidentified influenza virus)
   OR
2. A primary / secondary impression code J80, J98.09 (Acute respiratory distress syndrome, Respiratory disorder unspecified) with a match in the narrative for ILI, influenza like illness, Flu, Flu-, Flu\., or influenza
   OR
3. Any incident with a match in the narrative for ILI, influenza like illness, Flu, Flu-, Flu\., or influenza.

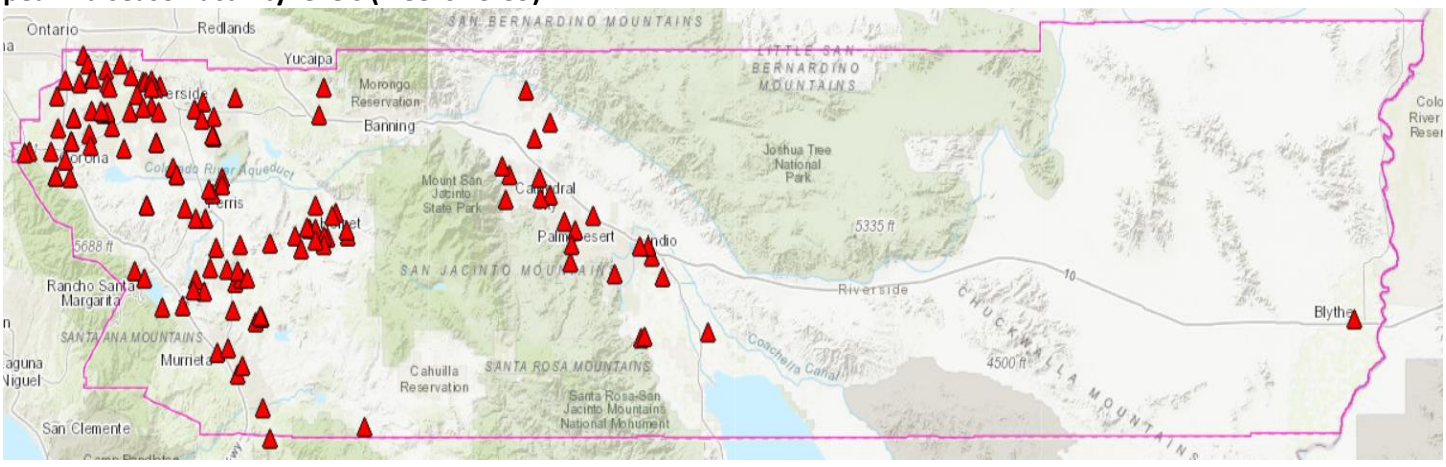
EMS ILI response two standard deviations above the calculated baseline average during non-peak flu seasons is considered a surge in flu activity. For the current Flu season 2020-'21, the standard deviation threshold value is not calculated as there was abnormal non-peak flu season behavior due to COVID-19. The threshold value listed in the graph is based on previous years non-peak flu season**.** Surges are identified 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



PUBLIC HEALTH AND MEDICAL SYSTEM STATUS	
Green	The Public Health and Medical System is in usual day-to-day status. Situation resolved; no assistance is required.
Yellow	The Public Health and Medical System is managing the incident using local resources or existing agreements. No assistance is required.
Orange	The Public Health and Medical System requires assistance from within the local jurisdiction/Operational Area.
Red	The Public Health and Medical System requires assistance from outside the local jurisdiction/Operational Area.
Black	The Public Health and Medical System requires significant assistance from outside the local jurisdiction/Operational Area.
Grey	Unknown.

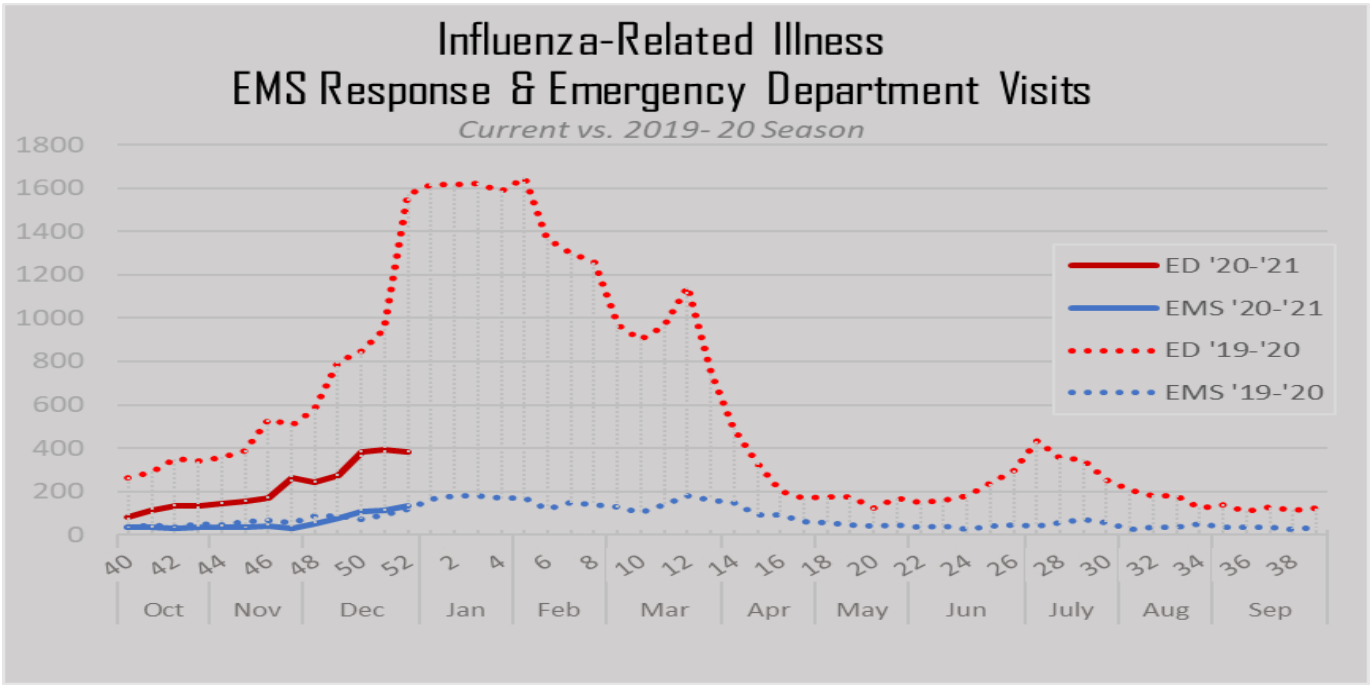
During Week 52, EMS ILI response was ELEVATED ABOVE the two standard deviation thresholds compared to non-peak flu season activity levels (weeks 13-39).



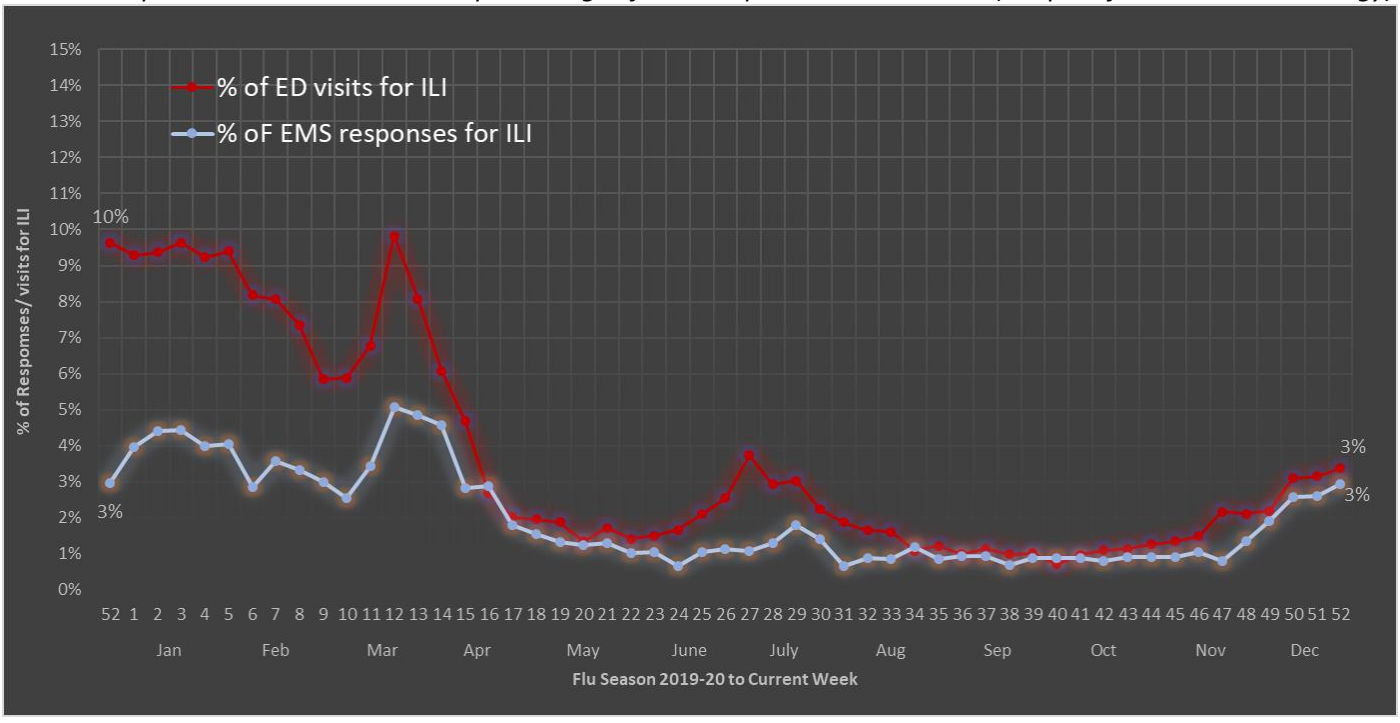
ILI-related EMS response in Riverside County, ePCR distribution map: Week 52

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's) *Early Notification of Community-based Epidemics (ESSENCE)* system as part of the National Syndromic Surveillance Program (NSSP). Fifteen 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.



EMS ILI responses and ED ILI visits as a percentage of their respective total volume (adapted from CDC methodology)



**Week 40 & 41 ESSENCE data is partial data due to a temporary outage at four facilities.*

***A new Riverside County hospital joined ESSENCE in week 38 of 2020 for a total of 15 participating hospitals. The addition of one hospital slightly elevates the baseline count from that week forward compared to previous weeks.*

APOT AND APOD DEFINITIONS

9-1-1 Ambulance Responses

For the purpose of reporting patient offload time and delays, only ALS (Advance Life Support) ground transport units responding to 9-1-1 incidents are included in this report. It also 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.

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.

APOD Compliance

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

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.[3] 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.[4]

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.

Data for 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 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.

-For inquiries, please contact EMS Administrator, TDouville@rivco.org

-Current report prepared by Sudha Mahesh & Catherine Borna Farrokhi, Riverside County EMS Agency

-ESSENCE Emergency Department data compiled by Rick Lopez, Riverside County Department of Public Health

[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 4204, Transfer of Patient Care. http://www.remsa.us/policy/4204.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

[10] CDC, Climate and Health Program. 2010. https://www.cdc.gov/climateandhealth/effects/default.htm