Special Seasonal Report

RIVERSIDE COUNTY EMS AGENCY

Ambulance Patient Offload Time

Week 50 (12/06/20 – 12/12/20)

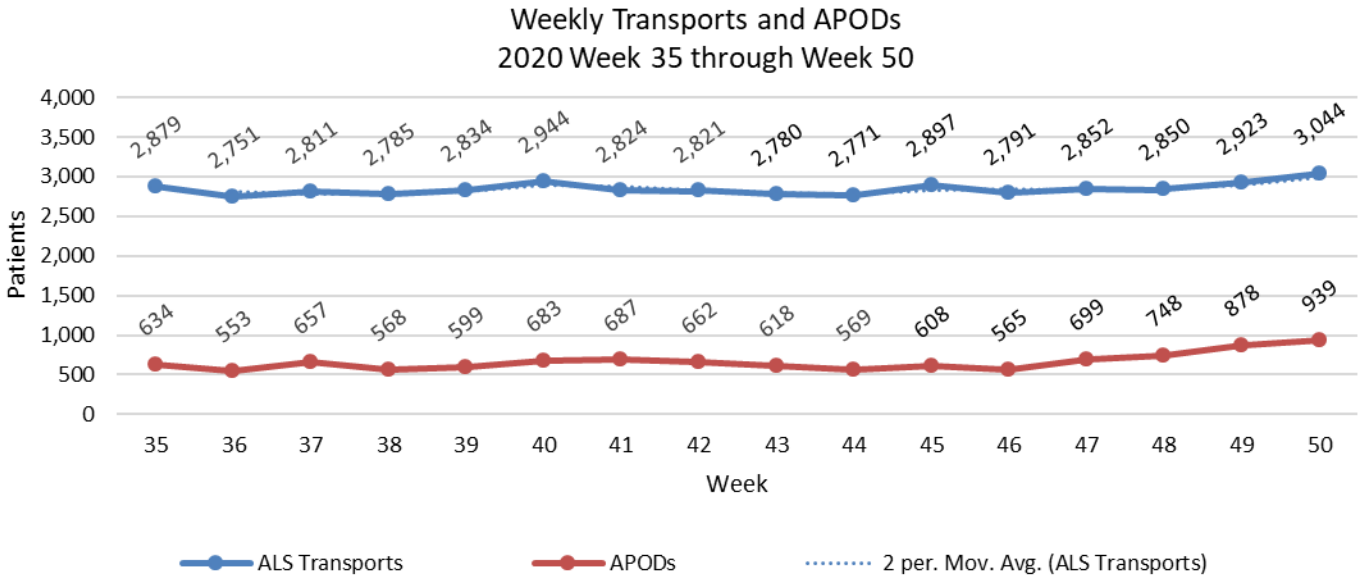
2020-21 Seasonal Report

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

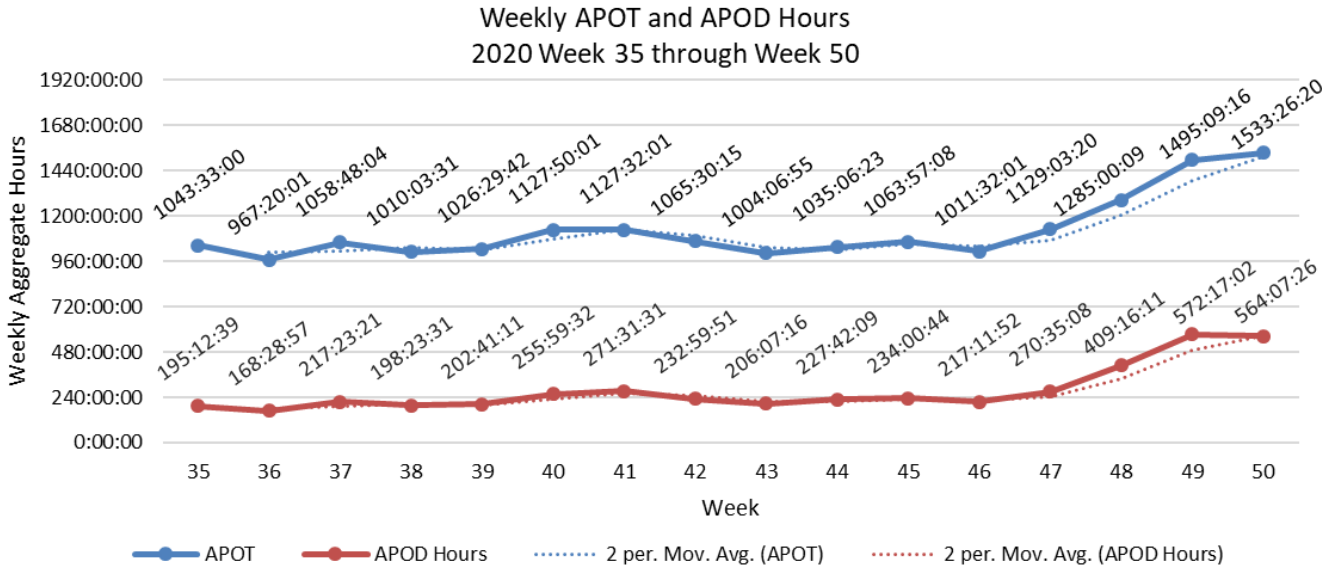
Prepared by Riverside County EMS Agency – December 15, 2020

SPECIAL SEASONAL REPORT

In an effort to monitor seasonal surge in Ambulance Patient Offload Time (APOT), Riverside County EMS Agency is publishing weekly reports. The following charts represent weekly aggregate APOT/APOD data for the past 16 weeks, updated weekly.



- During 2020 Week 50, there were a total of **3,044 transports in Riverside County**— 4.1% INCREASE from the previous week's 2,923 transports.
- The number of **APODs in Week 50 was 939,** 6.9% ABOVE the previous week's total of 878 APODs.

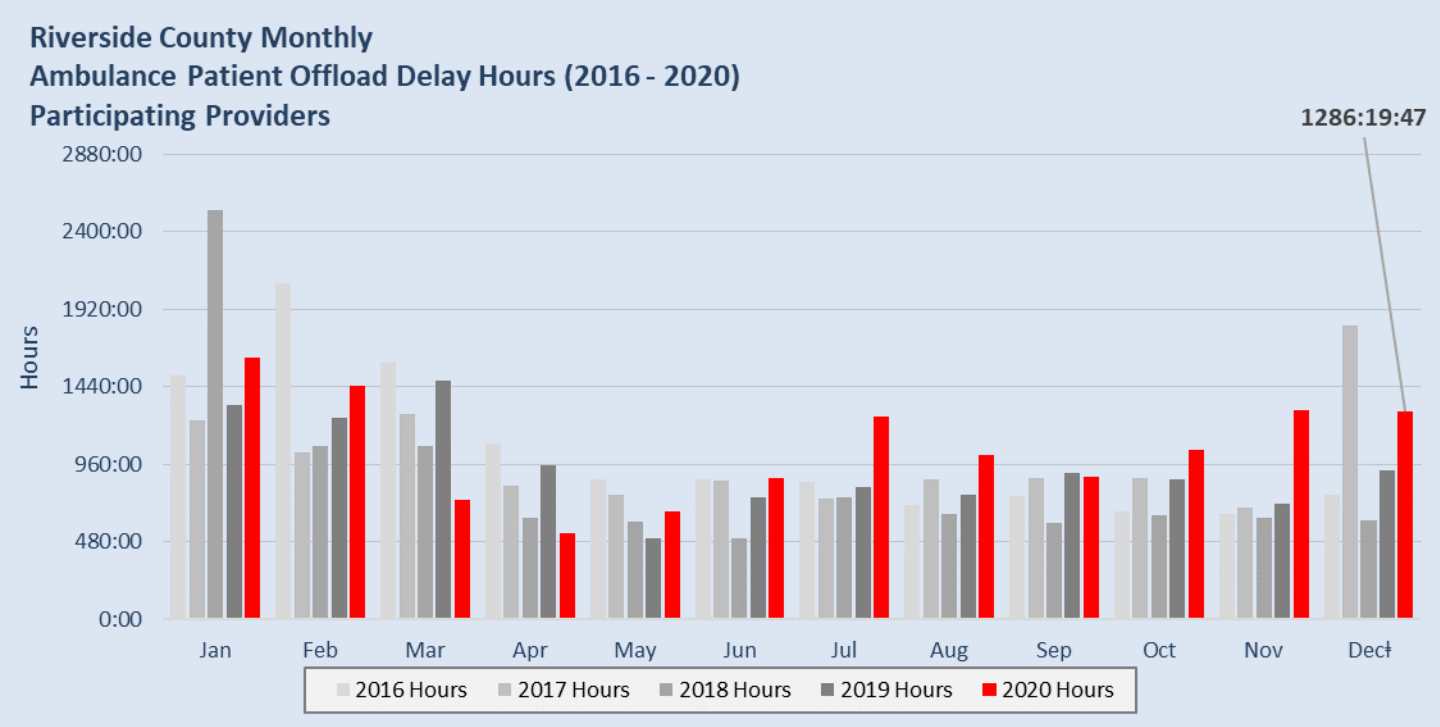


- During 2020 Week 50, **APOT county-wide totaled 1533.4 hours** — 2.6% ABOVE the previous week's total of 1495.2 hours.
- County-wide **APOD hours for Week 50 totaled 564.1 hours**, a 1.4% DECREASE from the previous week's total of 572.3 hours.

RIVERSIDE COUNTY AMBULANCE PATIENT OFFLOAD TIME

The data provided illustrates total ambulance patient offload delay time (hh:mm:ss) by month for 2016 through the current Week 50 from hospitals within Riverside County. To qualify for this chart, the duration of offload delay must be greater than 30 minutes, and only the time period after the first 30 minutes is summed.

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 report). This represents a different methodology in offload time measurement. *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.*



**For May of 2016, actual totals may have been slightly higher than are reported due to a 3-day CAD outage.*
***Beginning August 2017, times represented include all participating providers. Prior to August, data included AMR responses only.*
‡Dec 2020 *is a partial month*

APOD AMBULANCE REDIRECTION

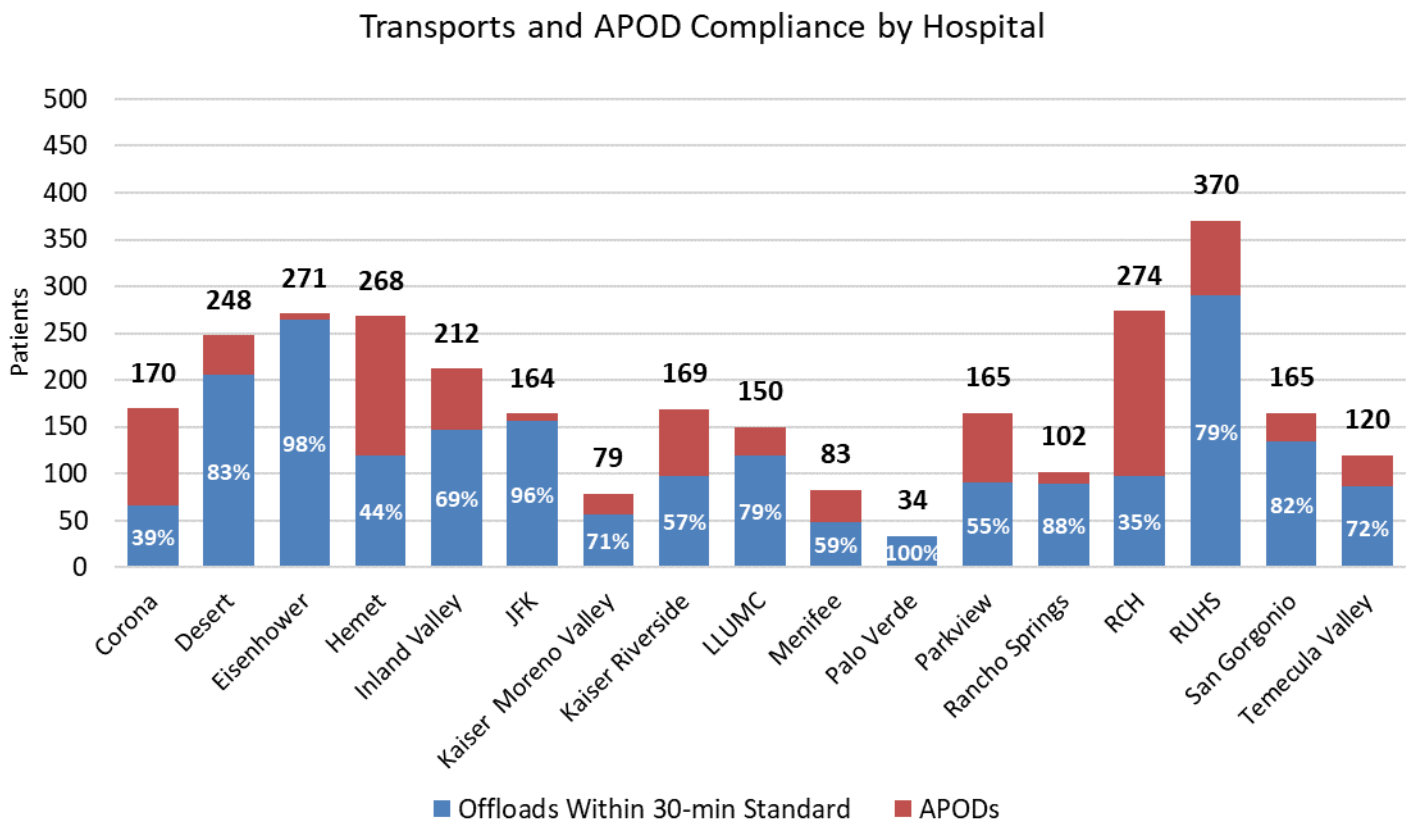
On October 1, 2019, Riverside County EMS Agency activated Policy 6104 (http://www.remsa.us/policy/6104.pdf) to allow redirection of ambulances from hospitals that have extended Ambulance Patient Offload Delay (APOD)--to the closest most appropriate hospital that does not have extended APOD. Extended 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 50.

	Occurrences of APOD Redirection
Corona Regional Medical Center	11
Hemet Valley Medical Center	12
Kaiser Permanente Moreno Valley Medical Center	5
Kaiser Permanente Riverside Medical Center	8
Loma Linda University Medical Center--Murrieta	2
Menifee Valley Medical Center	6
Parkview Community Hospital	7
Rancho Springs Medical Center	1
Riverside Community Hospital	16
Riverside University Health System	1
Grand Total	**69**

AMBULANCE PATIENT OFFLOAD TIME BY HOSPITAL

Key: High | Low/Best

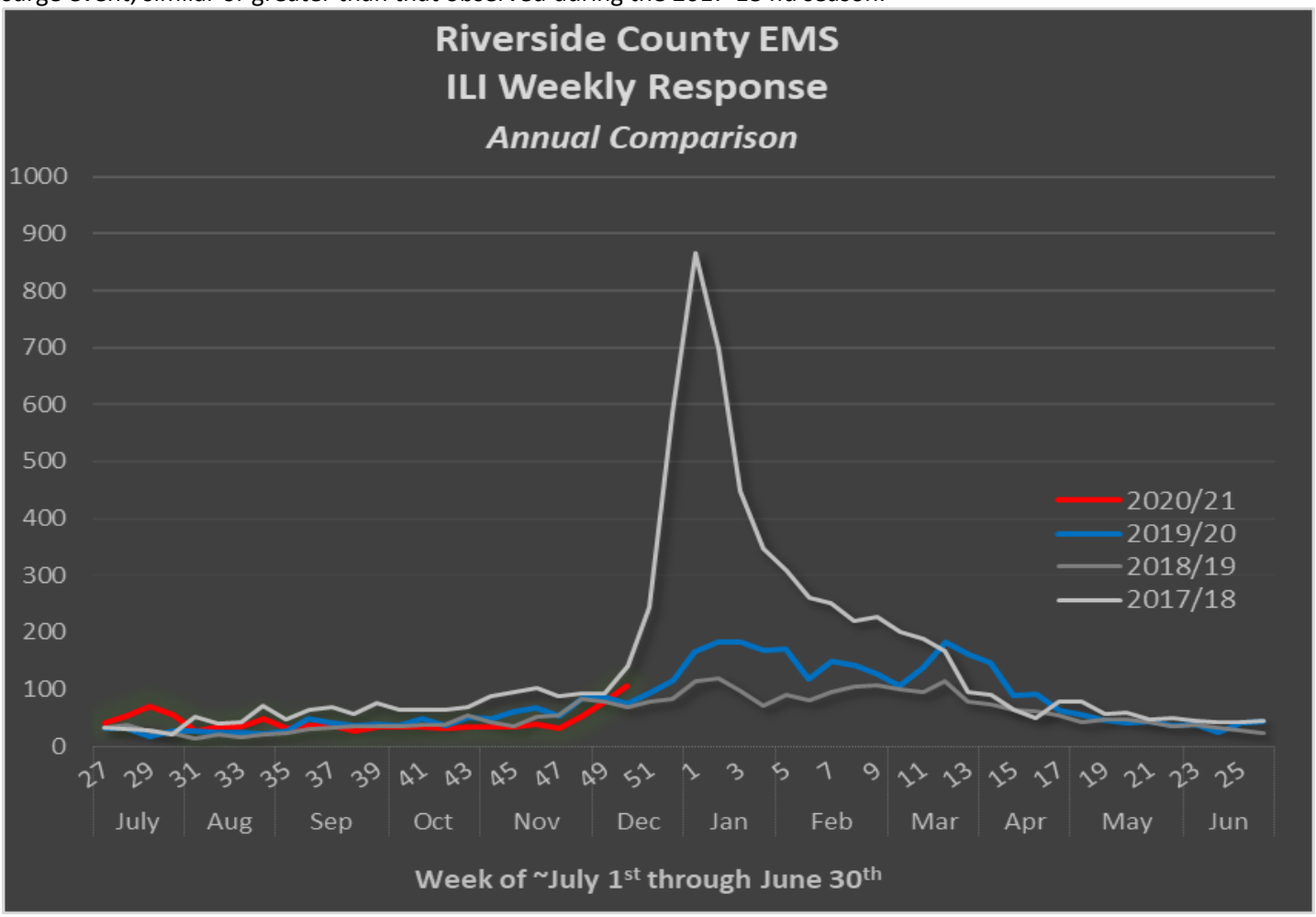
	APOT Snapshot				
	ALS Transports	APOT	APOD Hours	APODs	APOD Compliance
Corona Regional Med Ctr	170	157:32:42	87:27:43	104	38.8%
Desert Regional Med Ctr	248	78:34:09	16:04:47	42	83.1%
Eisenhower Health	271	45:47:47	0:31:57	6	97.8%
Hemet Valley Hospital	268	214:18:59	108:15:17	149	44.4%
Inland Valley Med Ctr	212	94:08:00	23:34:45	65	69.3%
JFK Hospital	164	29:53:48	3:54:25	7	95.7%
Kaiser Hospital Moreno Valley	79	42:26:03	18:29:52	23	70.9%
Kaiser Hospital Riverside	169	113:41:12	51:49:12	72	57.4%
Loma Linda Univ Med Ctr Mur	150	54:44:16	11:32:07	31	79.3%
Menifee Med Ctr	83	66:05:48	35:20:35	34	59.0%
Palo Verde Hospital	**34**	**5:48:11**	**0:00:00**	**0**	**100.0%**
Parkview Community Hospital	165	116:15:50	54:50:11	74	55.2%
Rancho Springs Med Ctr	102	30:11:54	3:30:36	12	88.2%
Riverside Community Hospital	274	**235:48:33**	**120:18:23**	**177**	**35.4%**
Riverside University Health System	**370**	138:51:40	14:52:18	79	78.6%
San Gorgonio Mem Hospital	165	59:43:30	6:02:11	30	81.8%
Temecula Valley Hospital	120	49:33:58	7:33:07	34	71.7%
Totals	**3,044**	**1533:26:20**	**564:07:26**	**939**	**69.2%**



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.

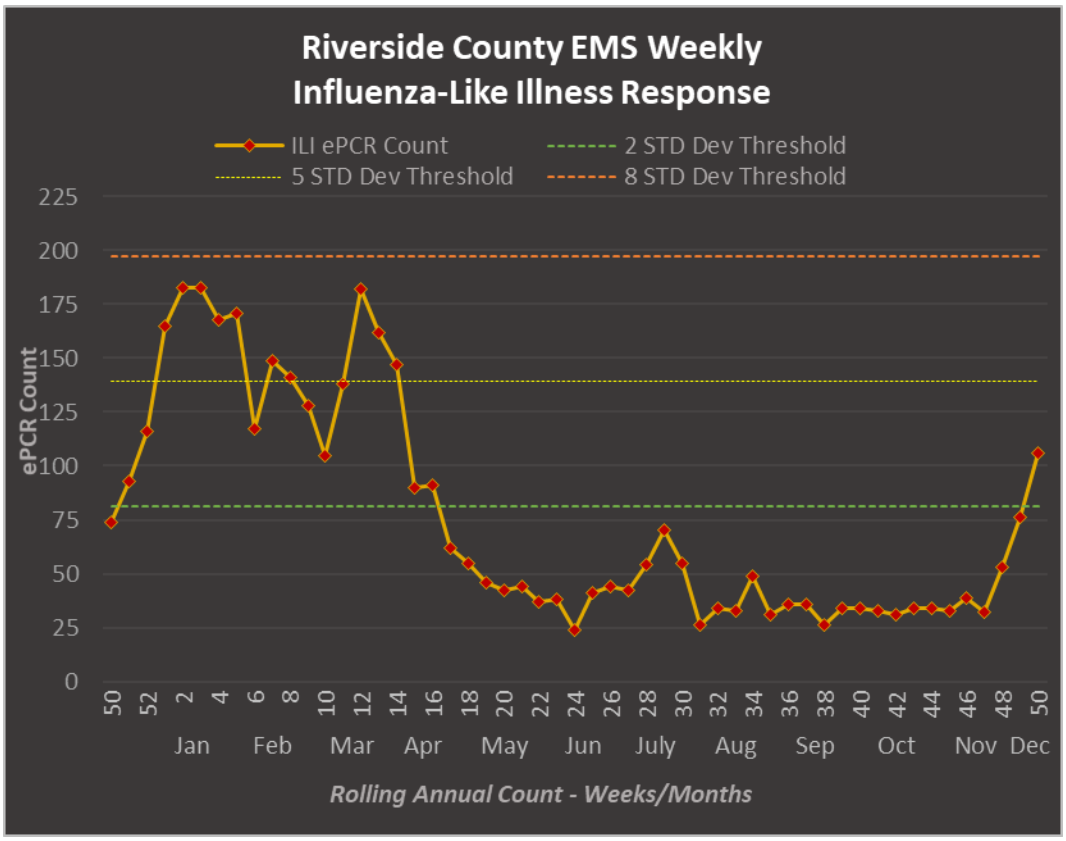
The ILI trigger evaluates electronic patient report (ePCR) data using the following methodology:

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.

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

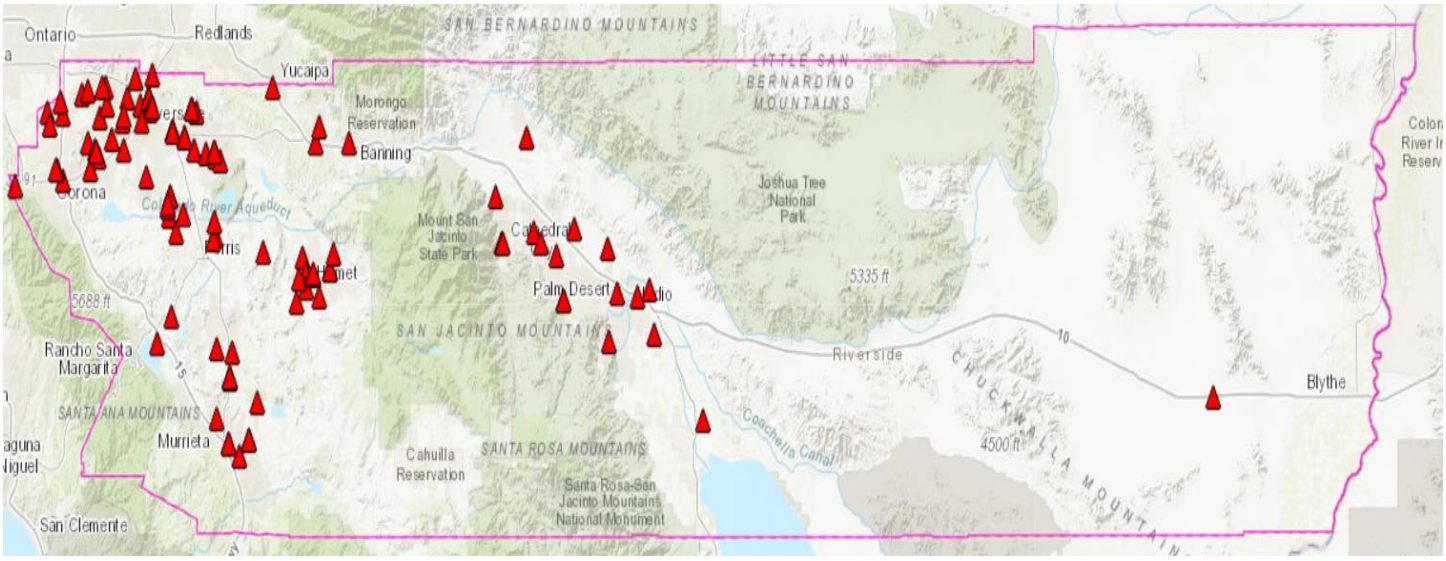
EMS ILI response two standard deviations above the calculated baseline average during non-peak flu seasons is considered a surge in flu activity. For the current Flu season 2020-'21, the standard deviation threshold value is not calculated as there was abnormal non-peak flu season behavior due to COVID-19.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

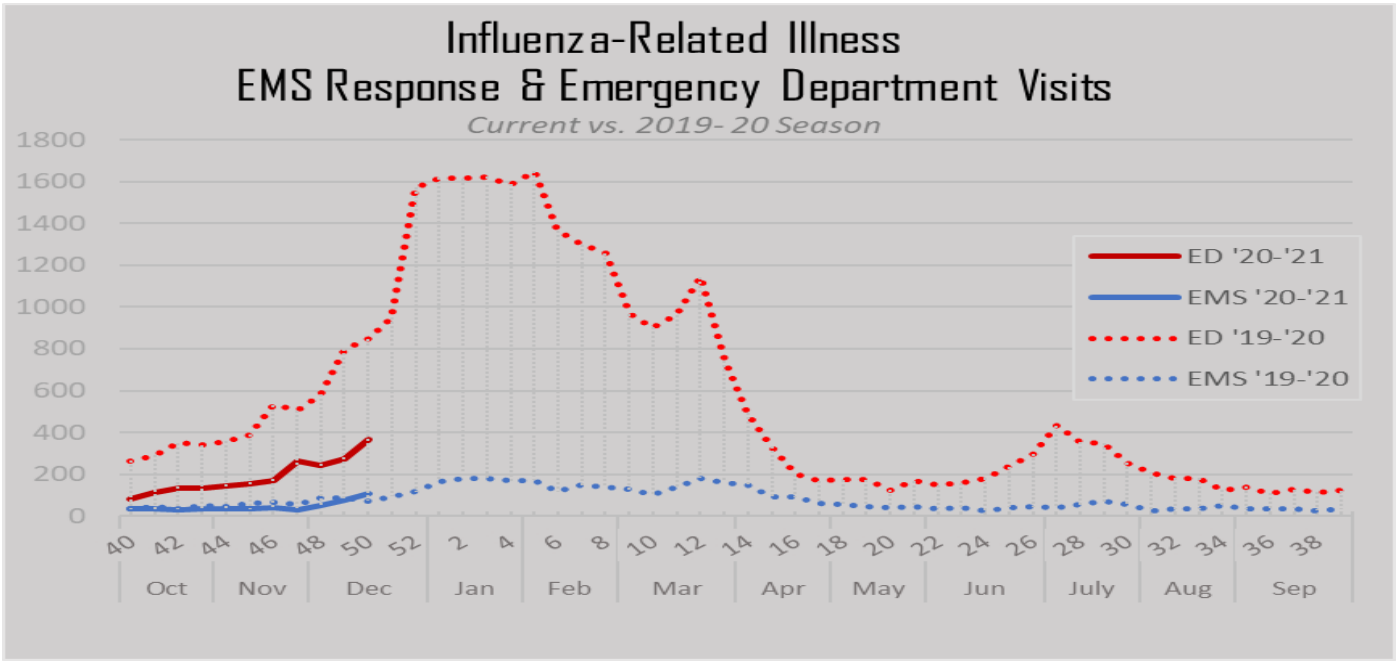
During Week 50, EMS ILI response was ELEVATED ABOVE the two standard deviation thresholds compared to non-peak flu season activity levels (weeks 13-39).



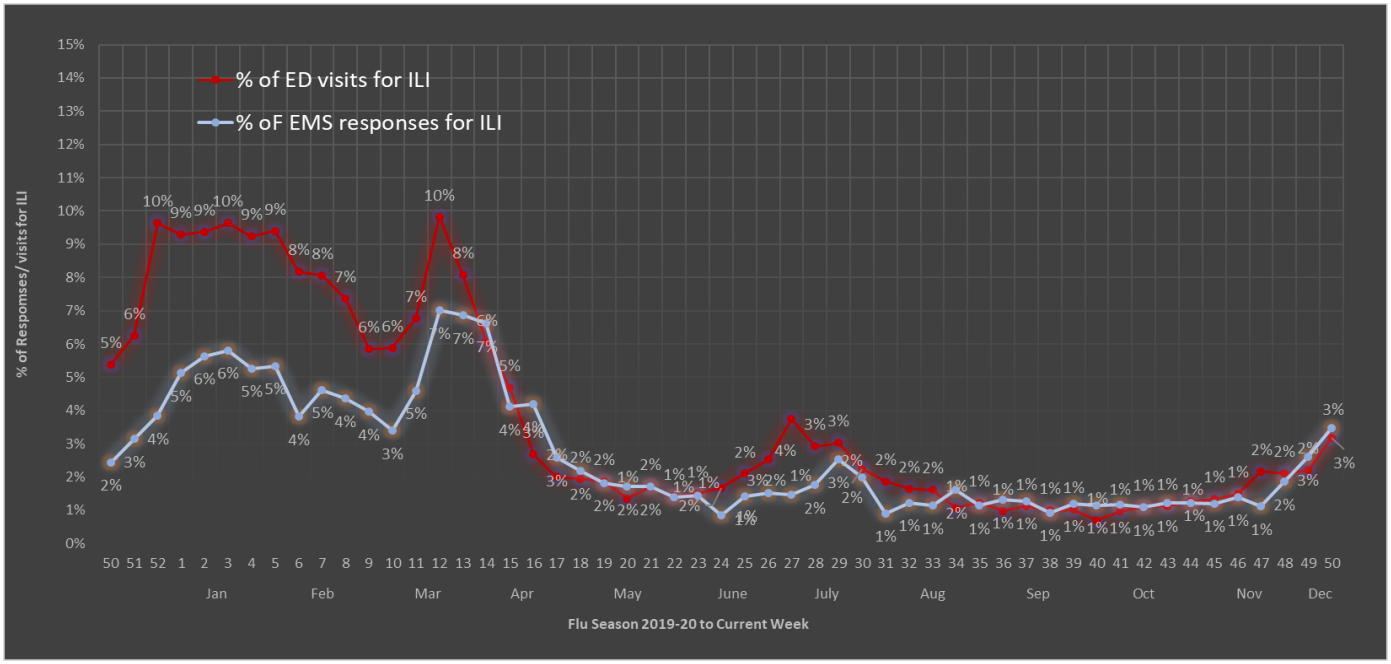
ILI-related EMS response in Riverside County, ePCR distribution map: Week 50

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

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.

[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