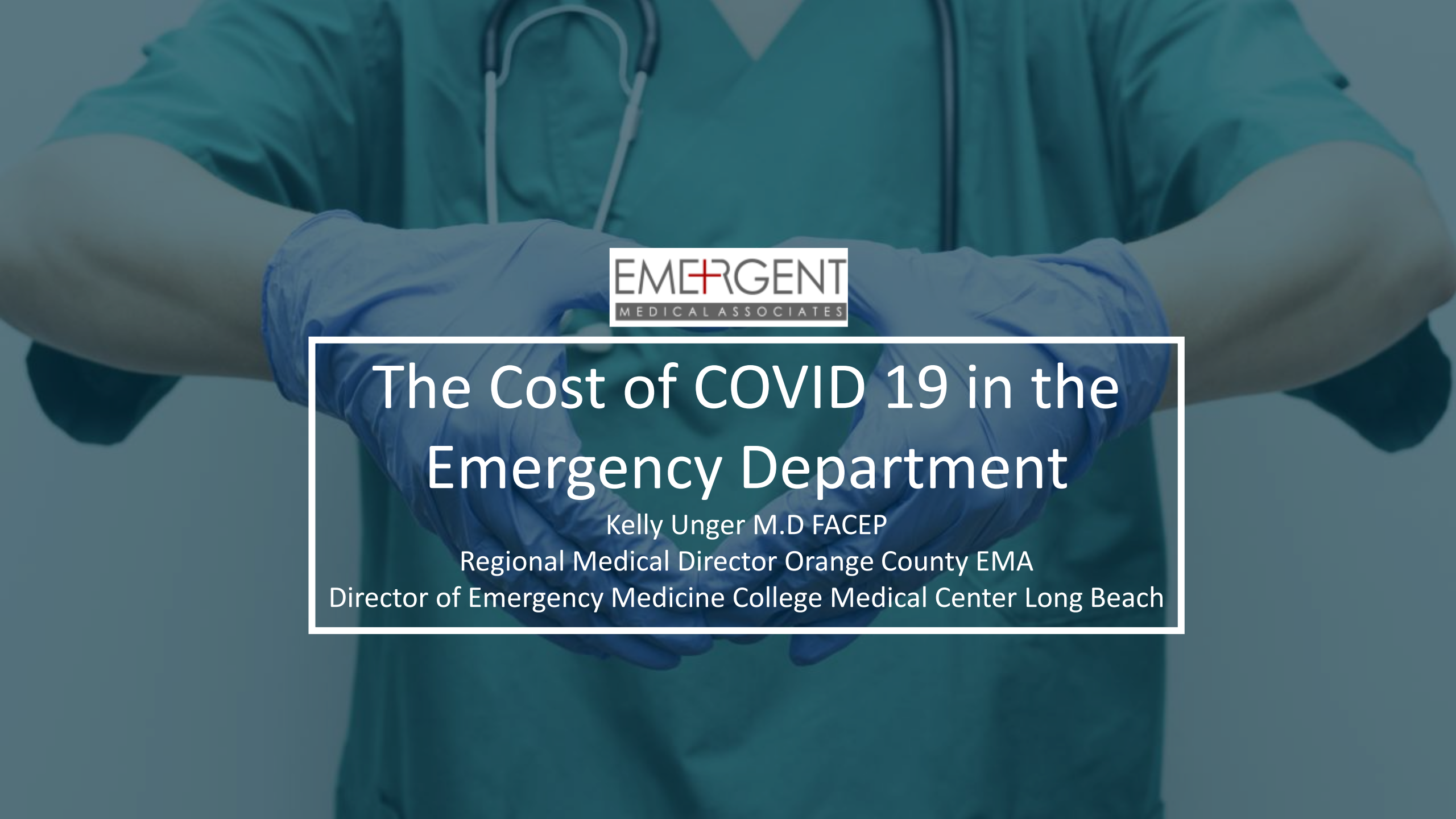

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The Cost of COVID 19 in the Emergency Department

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Regional Medical Director Orange County EMA
Director of Emergency Medicine College Medical Center Long Beach

Before COVID 19

- **The CDC estimates that ED volumes have increased 19% over the past 10 years**[1]
- **EMA has seen growth across California sites of 2-3 % annually during that time**
- **Per EDBA in 2019, "It is possible, and even likely, that the significant changes in the American health system that will follow this coronavirus pandemic will result in very different methods of providing unscheduled and emergency care."**[1]

COVID 19 Timeline for Estimated Infections

CA was hit in Phase 3 Infections began ramping up in November 2020 and peaked late December 2020

https://covid19.healthdata.org

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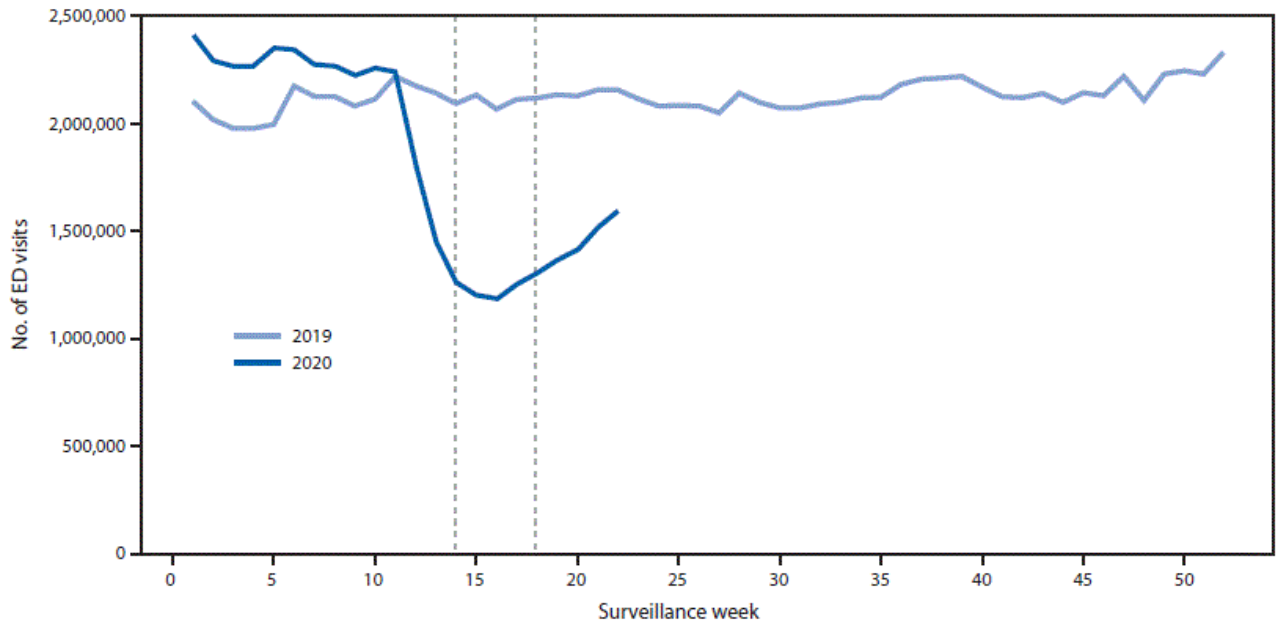
US ED volume curve during COVID peak

FIGURE 1. Weekly number of emergency department (ED) visits — National Syndromic Surveillance Program, United States,* January 1, 2019– May 30, 2020†



* Hawaii, South Dakota, and Wyoming are not included.

† Vertical lines indicate the beginning and end of the 4-week coronavirus disease 2019 (COVID-19) early pandemic period (March 29–April 25, 2020) and the comparison period (March 31–April 27, 2019).

42% drop in ED volume Nationally

Lowest volume week across EMA sites was down 53% in SoCal region

Volume Curve Comparisons All ED Volume

EMA – Southern California Region

- Peak volume loss was in April of 2020 down 44% versus non-flu season averages
- June of 2021 down 5% compared to non-flu season averages

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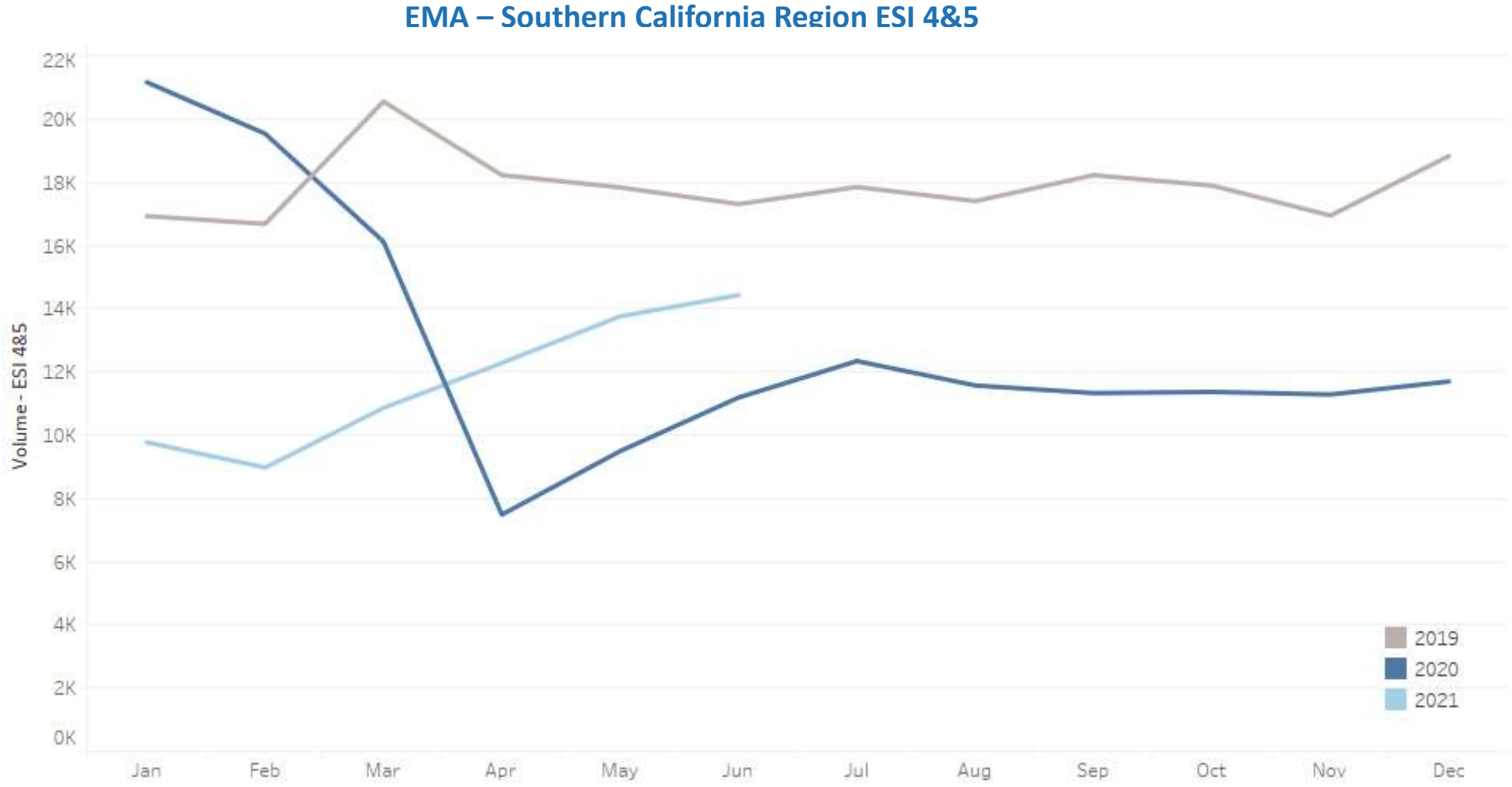
Volume Curve Comparisons Level 4/5 ED Volume



- Low acuity volume down 68% in April of 2020 compared with non- flu season averages
- June 2021 down 4% compared with non-flu season averages

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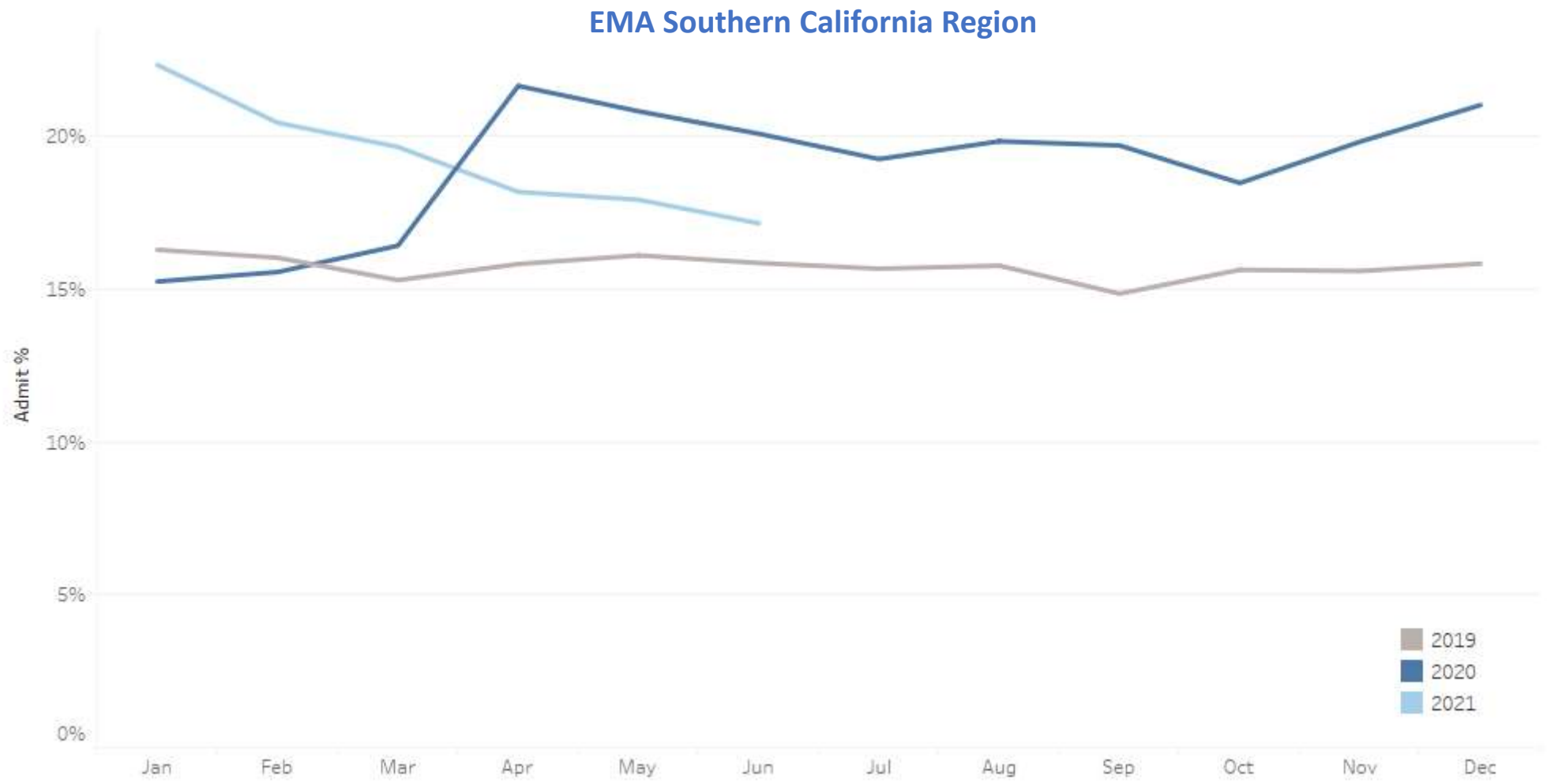
Admit Rate



- Average admit rate is 15%
- Significant increase in rate in April of 2020 above 20% now normalizing

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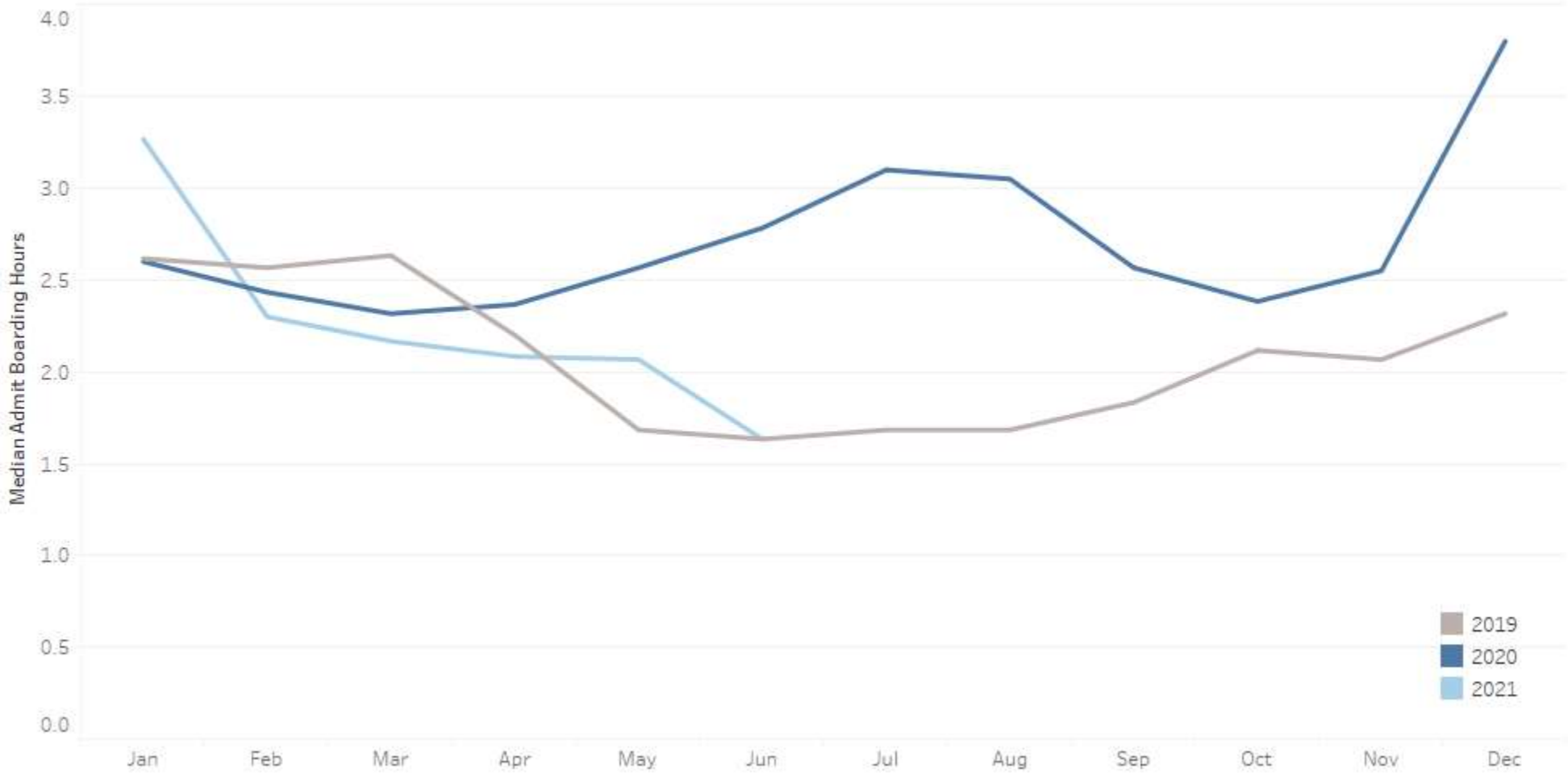
Boarding



- Boarding hours increased 104% in Dec 2020

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Which patients did we lose?

- Patients under 14 years of age (less infectious illness such as URI and GI viruses due to home isolation and masking) [2]
- Females (visits declined 37% among males but 45% among females) [2]
- Visits for nonspecific chest pain declined as did myocardial infarction[2]
- Trauma related visits declined
- Ratio for visits for cardiac arrest increased suggesting delay in care led to mortality [2]

Where did they go?

- Medical Isolation (avoidance of the emergency room due to fear)
- Urgent Cares
- Telemedicine visits
- Greatest loss in volume was the level 4/5 lower acuity patients

Behavioral Health Visit Trends

- A new study published in *JAMA Psychiatry* found that emergency department (ED) visit rates for mental health conditions (MHCs), suicide attempts (SAs), drug and opioid overdoses (ODs), intimate partner violence (IPV), and suspected child abuse and neglect (SCAN) all increased between mid-March through October 2020, compared with the same time period in 2019 [3]
- Opioid ODs exhibited the most consistent increases in counts with only a slight drop when ED volume was at its lowest [3]

How We Responded to Volume/Revenue Loss

- Decreased physician coverage but not number of shifts allowing for flexibility

***Physicians saw a loss of hours and income

- Encouraged our physicians to apply for PPP and EDIL loans

***Effective in 2020 but did not cover physician's losses in 2021

- Our organization secured HHS funding through the Cares Act and Provider Relief Funds

Challenges on the Front Lines

- As volume decreased, acuity increased and each patient interaction became more time consuming
- Donning and doffing of PPE led to decreased productivity
- ED physicians were utilized in inpatient units for intubations and arrests taking them out of the Emergency Department for long periods of time
- Stress of becoming ill or making family members and loved ones ill
- Loss of income

Physician burnout

- Emergency Medicine has been a specialty with some of the highest burn out rates
- One large recent meta-analysis through Sept 2019 shows that approximately 40% of EM physicians experience high levels of emotional exhaustion and depersonalization [4]
- Covid has only made these numbers worse

Physician Wellness

- Significant resources need to be aimed at front line workers including EM physicians
- ACEP offers a Wellness and Assistance Program free to members
- ACEP initiated a wellness week
- EMA has a wellness committee that surveys physician burnout and offers resources

Emerging from the COVID 19 Pandemic

- Per the CDC, by the week of May 24–30 2021, visits remained 26% below same week in 2019 nationally [2]
- Currently EMA ED volume is 8% down across the organization with some areas normalized and several above non-flu season averages
- Admit rates have normalized to 15-20%

Factors Affecting Rebound

- Vaccination hesitancy
- Pockets of the country remain at risk (rural areas, lower socioeconomic communities, religious communities)
- Variant risk highest in these areas
- Delta variant is now the most common representing 57.1% of the new covid cases in Region 9 (West) over two weeks ending July 3rd per CDC[5]
- RSV and Influenza seasons to begin in November 2021

Los Angeles County Vaccination Rates

People Vaccinated	At Least One Dose	Fully Vaccinated
Total	5,982,143	5,183,429
% of Total Population	59.6%	51.6%
Population ≥ 12 Years of Age	5,964,322	5,171,944
% of Population ≥ 12 Years of Age	69.2%	60%
Population ≥ 18 Years of Age	5,619,983	4,890,173
% of Population ≥ 18 Years of Age	71.2%	61.9%
Population ≥ 65 Years of Age	1,189,519	1,025,282
% of Population ≥ 65 Years of Age	84.1%	72.5%

See more information on what these data mean.

CDC | Data as of: July 11, 2021 6:00am ET. Posted: Sunday, July 11, 2021 1:40 PM ET

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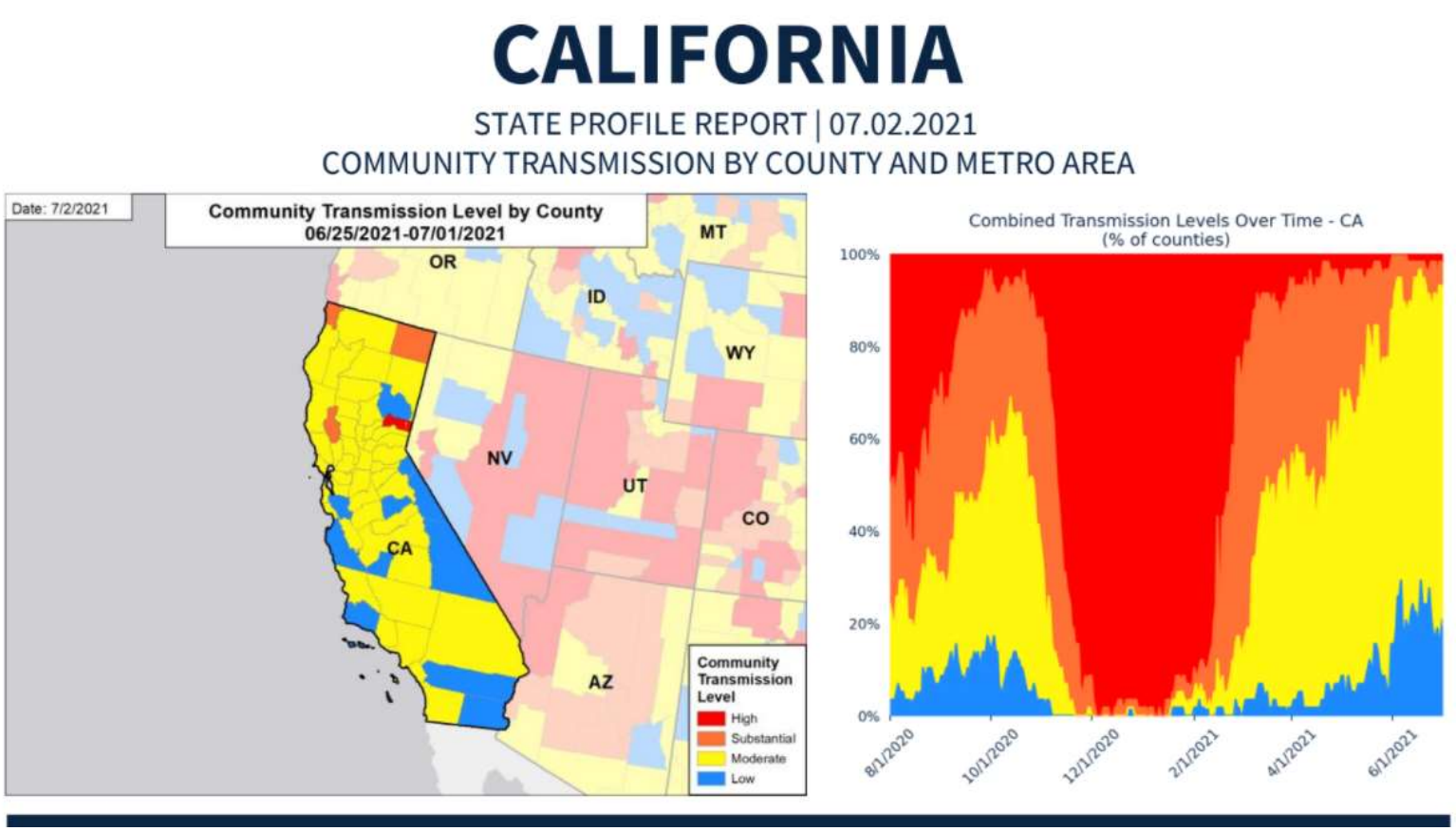
Los Angeles Level of Community Transmission = Moderate



All Orange Counties: Lake, Del Norte, Modoc
All Orange CBSAs: Clearlake, Crescent City
All Red Counties: Sierra

https://healthdata.gov/Community/COVID-19-State-Profile-Report-California

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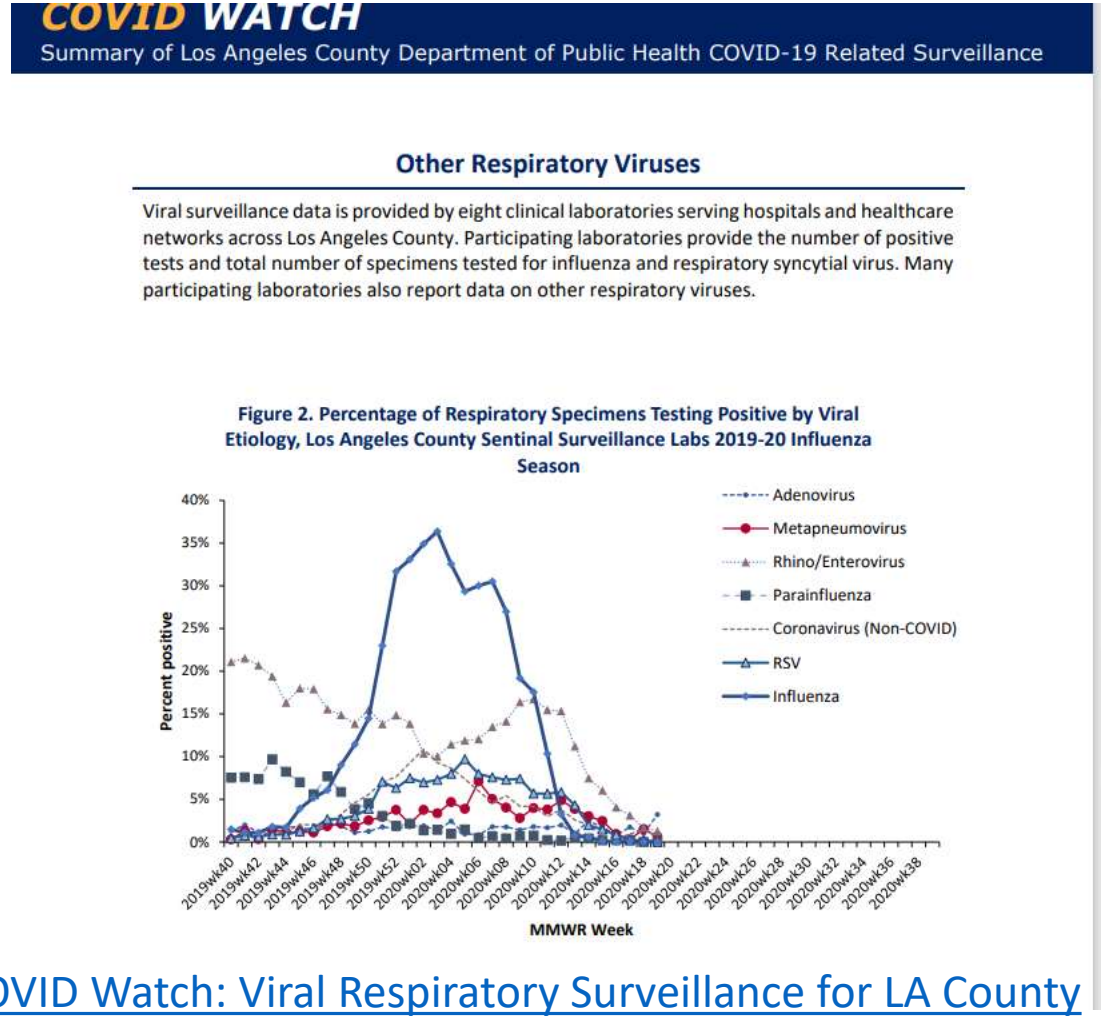
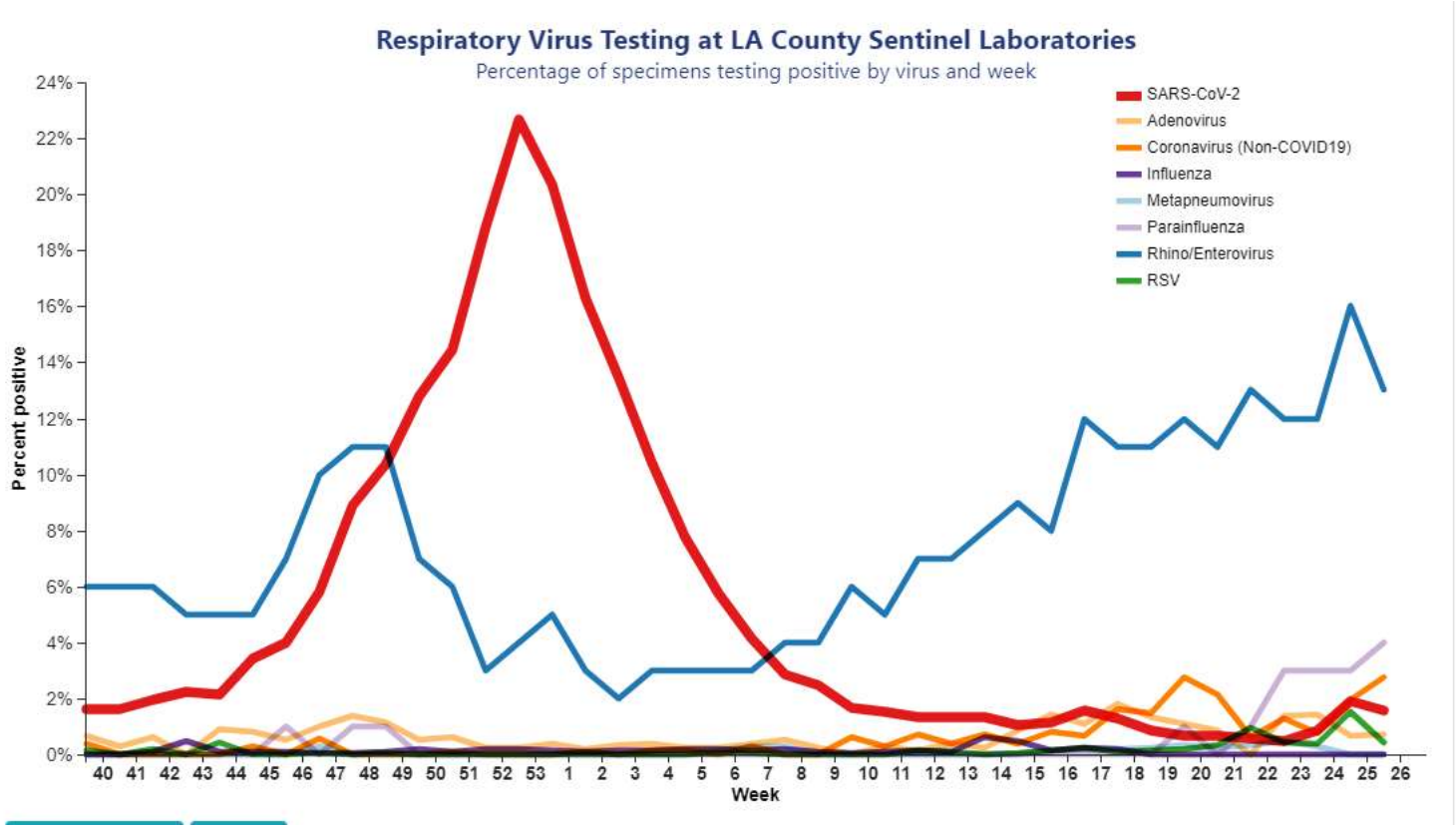
Typical Viral Serology Trends



[COVID Watch: Viral Respiratory Surveillance for LA County]
www.publichealth.lacounty.gov/acd/ncorona19/covidwatch

- Influenza, RSV, and non- COVID Coronavirus peak weeks 50 through week 8 each year

Viral Serology Trends 2020-2021



- SARS-CoV-2 left influenza and other URI viruses flat
- Recent resurgence of Rhino/Enterovirus

[COVID Watch: Viral Respiratory Surveillance for LA County]
www.publichealth.lacounty.gov/acd/ncorona19/covidwatch

Predictions

- The resurgence of influenza and other seasonal viruses may mean return to normal volume this winter
- The delta virus variant will disproportionally affect certain communities and offset return to normalcy
- Some EDs will rebound more quickly than others due access to care issues
- Patient's that can have sought other forms of care such as tele-health and urgent cares and prefer it

References

1. EDBA Emergency Department Benchmarking Alliance, Before there was COVID 2019 ED Performance Measures Report
2. Hartnett KP, Kite-Powell A, DeVies J, et al. Impact of the COVID-19 Pandemic on Emergency Department Visits — United States, January1, 2019–May 30, 2020. MMWR Morb Mortal Wkly Rep 2020;69:699–704.
3. Holland KM, Jones C, Vivolo-Kantor AM, et al. Trends in US Emergency Department Visits for Mental Health, Overdose, and Violence Outcomes Before and During the COVID-19 Pandemic. *JAMA Psychiatry.* 2021;78(4):372–379. doi:10.1001/jamapsychiatry.2020.
4. Zhang, Qin MD[a]; Mu, Ming-chun MD[c]; He, Yan MD[d]; Cai, Zhao-lun MD[c]; Li, Zheng-chi PhD[b,*] Burnout in emergency medicine physicians, Medicine: August 07, 2020 - Volume 99 - Issue 32 - p e21462
5. https://covid.cdc.gov/covid-data-tracker

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