COUNTY OF LOS ANGELES
EMERGENCY MEDICAL SERVICES COMMISSION

10100 Pioneer Boulevard, Suite 200, Santa Fe Springs, CA 90670
(562) 378-1604 FAX (562) 941-5835
http://ems.dhs.lacounty.gov

DATE: **September 15, 2021**
TIME: **1:00 – 3:00 PM**
LOCATION: **Zoom Video Conference Meeting**
Join Zoom Meeting:
https://zoom.us/j/97565380793?pwd=L1dhaUVybnMyK2tiZE95Q29jK3RDdz09
Meeting ID: 975 6538 0793
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The Commission meetings are open to the public. You may address the Commission on any agenda item before or during consideration of that item, and on other items of interest which are not on the agenda, but which are within the subject matter jurisdiction of the Commission. Public comment is limited to three (3) minutes and may be extended by Commission Chair as time permits.

NOTE: Please INPUT YOUR NAME if you would like to address the Commission.

AGENDA

I. CALL TO ORDER – Chairman Paul Rodriguez

Instructions for Zoom:
1) Please use your computer to join the Zoom meeting to see documents.
2) Join Zoom meeting by computer (preferable) or phone.
3) Input your name when you first join so we know who you are.
4) You can join Zoom by one tap mobile dialing.
5) Join meeting by landline using any of the "dial by location" numbers and manually entering the Meeting ID and following # prompts.
6) Mute and unmute yourself by clicking on the microphone icon at the bottom of computer screen, or *6 by phone.
7) Volume is adjusted by using the little arrow next to the microphone icon.

II. INTRODUCTIONS/ANNOUNCEMENTS/PRESENTATIONS

III. CONSENT AGENDA (Commissioners/Public may request that an item be held for discussion. All matters are approved by one motion unless held.)

1. **MINUTES**
   July 21, 2021

2. **COMMITTEE REPORTS**
   2.1 Base Hospital Advisory Committee
   2.2 Data Advisory Committee
   2.3 Provider Agency Advisory Committee

3. **POLICIES**
   3.1 Reference No. 834.1: Patient Refusal of Treatment/Transport and Treat and Release at Scene Quick Reference Guide

3.2 Reference No. 1124: Disaster Preparedness Exercise/Drills

END OF CONSENT AGENDA

IV. BUSINESS

BUSINESS (OLD)

4.1 Prehospital Care of Mental Health and Substance Abuse Emergencies
- 4.1.1 Ad Hoc Workgroup on the Pre-Hospital Care of Mental Health and Substance Abuse Emergencies – Recommendation Eight
- 4.1.2 Press Release: First Responders Work Together to Reduce Use of Force Through Integrated Medical Intervention Response Pilot Program (Attachment)

4.2 Ambulance Patient Offload Time (APOT)
4.3 LA County COVID-19 Update – EMS Agency
4.4 EMS Commission Membership – Vote Required
- 4.4.1 Paramedic Representation – California State Firefighters Association (CSFA) to California Professional Firefighters (CPF)

4.5 EMS Commission Ordinance and Composition Review (Attachment)

BUSINESS (NEW)

4.6 Data Advisory Committee Meeting Frequency (Attachment)
4.7 Annual Report to Board of Supervisors (Attachment)

V. LEGISLATION

VI. EMS DIRECTOR'S AND MEDICAL DIRECTOR'S REPORTS

CORRESPONDENCE

6.1 (07-14-2021) Police Chief Michael Ishii, Hawthorne PD: Officer Commendations
6.2 (07-30-2021) Bryan Webb, LACoFD: Implementation of Systemwide Dispatch Center Annual Program Reviews
6.3 (08-22-2021) Stephen Albrecht, Star Behavioral Health Urgent Care: Psychiatric Urgent Care Center Designation (Lancaster)
6.4 (08-24-2021) Distribution: Notification of Fatal or Non-Fatal Submersion Incidents by EMS to Public Health
6.5 (08-25-2021) Distribution: Standard Guidance for First Responders Entering Hospital/Health Facilities

VII. COMMISSIONERS' COMMENTS / REQUESTS

VIII. ADJOURNMENT

To the meeting of September 15, 2021

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MINUTES
JULY 21, 2021
Zoom Meeting

☐ *Captain Brian S. Bixler	Peace Officers' Assn. of LAC	Cathy Chidester	Executive Director
☐ Diego Caivano, M.D.	L.A. County Medical Assn.	Denise Watson	Commission Liaison
☒ Erick H. Cheung, M.D.	So. CA Psychiatric Society	Marianne Gausche-Hill	EMS Medical Director
☐ *Chief Eugene Harris	LAC Police Chiefs' Assn.	Kay Fruhwirth	EMS Nursing Director
☒ John Hisserich, Dr.PH	Public Member, 3rd District	Roel Amara	EMS Asst. Director
☒ Lydia Lam, M.D.	So. CA Chapter American College of Surgeons	Richard Tadeo	EMS Asst. Director
☒ James Lott, PsyD, MBA	Public Member, 2nd District	Nichole Bosson	EMS Asst Med Direct
☒ Carol Meyer, RN	Public Member, 4th District	Sara Rasnake	EMS Staff
☒ Gloria Molleda	League of CA Cities/LA County	Karen Rodgers	EMS Staff
☒ Robert Ower, RN	LAC Ambulance Association	Lorrie Perez	EMS Staff
☒ Garry Olney, DNP	Hospital Assn. of So. CA	Denise Whitfield	EMS Staff
☒ Kenneth Powell	LA Area Fire Chiefs' Assn.	Natalie Greco	EMS Staff
☒ Paul S. Rodriguez	CA State Firefighters' Assn.	Susan Mori	EMS Staff
☒ Jeffrey Rollman	So. CA Public Health Assn.	David Wells	EMS Staff
☐ *Joseph Salas	Public Member, 1st District	Andrea Solorio	EMS Staff
☐ *Nerses Sanossian, M.D.	American Heart Association	Christine Zaiser	EMS Staff
☒ Carole A, Snyder, RN	Emergency Nurses Assn.	Adrian Romero	EMS Staff
☒ Atilla Uner, M.D., MPH	American College of Emergency Physicians CAL-ACEP	Laura Leyman	EMS Staff
☐ *Gary Washburn	Public Member, 5th District		

GUESTS

Carl Povilaitis	LAC Police Chiefs' Assn.	Nicole Steeneken	LACoFD
Jason Tarpley, MD	American Heart Assn.	Ambulunz	
Laurie Donegan	LBM APCC	Andy Reno	
Jeff Meston	CSFA		

(Ab) = Absent; (*) = Excused Absence

I. CALL TO ORDER

The Emergency Medical Services (EMS) Commission meeting was held via Zoom Video Communications Conference Call due to the California Statewide Safer at Home Order related to the Coronavirus (COVID-19) pandemic. The meeting was called to order at 1:04 p.m. by Chairman Paul Rodriguez. A quorum was present with 13 Commissioners on the call.

II. INTRODUCTIONS/ANNOUNCEMENTS/PRESENTATIONS

Chairman Rodriguez welcomed meeting participants and provided instructions for public comments using Zoom.

Cathy Chidester, EMS Commission Executive Director, did roll call of the Commissioners.

III. CONSENT AGENDA

Chairman Rodriguez called for approval of the Consent Agenda and opened the floor for discussion.

Commissioner Robert Ower requested to hold Policies 3.1, Reference No. 503, and 3.2, Reference No. 503.1, from the Consent Agenda for discussion.

Commissioner Atilla Uner questioned if the language in Policies 3.6, Reference No. – 816 Physician at the Scene, should be changed from emergency medicine graduates to allow any EMS Fellow in an accredited Fellowship to have the same access as emergency medicine graduates.

Marianne Gausche-Hill, MD, EMS Agency Medical Director, expressed that the current language does not exclude taking someone in general surgery, as an example, but these emergency medicine and pediatric emergency medicine trainees are the only graduates that have been taken as part of the EMS Fellowship program to date so it was a practical issue to use that language.

Commissioner Uner commented on Policies 3.5, Reference No. 815 – Physician Orders for Life Sustaining Treatment (POLST), that this does not usually happen in the field. If a patient makes an autonomous decision to have POLST signed this is what the patient wants to have happen, and for anybody at the scene to turn that back around is a problem for patient autonomy.

Dr. Gausche-Hill expressed EMS Providers on scene should establish goals of care with healthcare providers, with the family, and the patient (as able) on scene if there are any concerns about the course of action that should be taken regarding the patient's current condition and the POLST. EMS providers should contact the base hospital, and usually it is at that point that those types of conflicts can be resolved.

Motion/Second by Commissioners Hisserich/Snyder to approve the Consent Agenda, with Policies 3.1, Reference No. 503, and 3.2, Reference No. 503.1 being held for discussion, was approved and carried unanimously.

Commissioner Ower recommended that Policies 3.1, Reference No. 503, include Reference No. 803 – Los Angeles County Paramedic Scope of Practice in the definition for Advanced Life Support (ALS).

Richard Tadeo, EMS Assistant Director, agreed to make the recommended change to Reference No. 503.

During discussion of Policies 3.2, Reference No. 503.1, questions were raised on how to notify skilled nursing facilities (SNF) that their patient may not go to a planned destination if the planned destination is on Basic Life Support (BLS) Diversion due to ED saturation, and who can override the ED ALS/BLS saturation.

Mr. Tadeo expressed that BLS Diversion is a very rare occurrence under extreme circumstances such as the COVID-19 surge. Typically, when hospitals request Diversion, it is limited to the ALS level. We will collaborate with health facilities' inspection division to get a roster of those nursing facilities in the affected area in the event that this rare instance is implemented. BLS diversion was a best practice during the disaster surge, and the process for BLS Diversion requires the approval of the EMS Agency with the Medical Alert Center assessing the region.

With respect to the ALS Diversion, the rules stand. If it is a base contact, certainly an MICN or base physician can override that diversion request based on the resources in that region. For instance, they can override a diversion request based on the condition of the patient.

Motion/Second by Commissioners Ower/Hisserich to approve the Consent Agenda including Policies 3.1, Reference No. 503, and 3.2, Reference No. 503.1, with the recommended changes was approved and carried unanimously.

1. MINUTES

May 19, 2021 Minutes were approved.

2. COMMITTEE REPORTS

2.1 Base Hospital Advisory Committee
2.2 Data Advisory Committee
2.3 Provider Agency Advisory Committee

3. POLICIES

3.1 Reference No. 503: Guidelines for Hospitals Requesting Diversion of ALS/BLS Patient
3.2 Reference No. 503.1: Diversion Request Requirements for Emergency Department Saturation
3.3 Reference No. 503.2: Diversion Request Quick Reference Guide
3.4 Reference No. 521: Stoke Patient Destination
3.5 Reference No. 815: Honoring Prehospital Do Not Resuscitate Orders. Physician Orders for Life Sustaining Treatment and End of Life Option (Aid-in-Dying Drug)
3.6 816: Physician at the Scene

END OF CONSENT AGENDA

IV. BUSINESS

BUSINESS (OLD)

4.1 Prehospital Care of Mental Health and Substance Abuse Emergencies

4.1.1 Ad Hoc Workgroup on the Pre-Hospital Care of Mental Health and Substance Abuse Emergencies – Recommendation Eight

Dr. Gausche-Hill reported the ad hoc committees have been meeting regularly. The subcommittee led by Dr. Denise Whitfield looking at medications has currently revised both Reference No. 1208 and Reference No. 1209, which are behavioral/ psychiatric crisis and agitated delirium treatment protocols. We added for pharmacologic management for behavioral health emergencies Olanzapine, which can be used as an oral disintegrating tab, and we will also obtain approval from the State to move forward.

We have also updated Reference No. 838, our restraint policy, after input from providers, physicians, law enforcement and mental health professionals. Finally, we have created two Medical Control Guidelines:

1) Care of the Agitated Patient (which includes de-escalation techniques)
2) Suicidal Risk Assessment

These will come to the Commission soon. We will initiate the review process in all committees to ensure enough stakeholder input to be ready to go by next year's EMS Update. Thanks to Dr. Erick Cheung, Commissioner, for his leadership. Thanks to Commissioners Ower, Rodriguez, Hisserich, Uner, and Caivano for attending these meetings or its subcommittees. Finally, thanks to the Commission for its vision in the behavioral ad hoc committee and its report that led to the initiation of this process.

These will go to the Base Hospital and Provider Advisory Committees soon. We have a near-complete draft ready for review by next week. We can begin that process through the summer and early fall with the idea that it would come to the Commission as information at the September 2021 meeting, and for final endorsement by the November 2021 meeting.

Commissioner Cheung offered to demonstrate a preview of the work to the Commission and receive feedback. And it was agreed that this would be beneficial.

4.2 Ambulance Patient Offload Time (APOT)

Mr. Tadeo reported on the first quarter APOT. The report does not fully reflect a full impact on early January during the COVID-19 surge, but it is a lot higher in terms of not meeting our threshold for our criteria of 30 minutes, 90% of the time. Data is coming from providers, as stated in Reference No. 503.1, and we are working with Hospital Association (HASC) to determine other ways to capture the data in a timely manner.

The limitation for obtaining APOT is the backlog from our providers submitting data to us. First Watch was proposed to the EMS Agency. We are looking at that product in terms of capability to send real time data to the hospitals, as well as the providers, to look at patient offload time. Challenges involved includes the interface with First Watch with the dispatch centers. The associated costs for the hospitals in terms of having a dashboard, and it would involve identifying units enroute to facility, identifying units waiting to be offloaded and waiting for transfer of care. HASC is trying to figure out costs, and we will try to see if there is some funding available to make this happen.

4.3 LA County COVID-19 Update – EMS Agency

Dr. Gausche-Hill reported on the status of COVID-19 in LA County. We are in a surge of cases, related to the Delta variant, which has about two-and-one-half times transmissibility of the alpha variant. The positivity rate from the LA County Public Health website is 3.55%. Approximately one month ago, the positivity rate was as low as .6%. We have easily quadrupled in terms of number of cases of COVID-19 in LA County. Deaths remain low as this is a younger cohort; however, the number of hospitalizations is going up. We have not seen the same concerning slope of cumulative cases in the ICUs as we saw with our previous surge.

We are no longer doing our standard COVID-19 poll, but I want to thank Richard Tadeo for putting this together from the California Department of Public Health data. As you can see, the number of hospitalizations is 425. Overall, we are seeing an increase in the number of children getting infected. It is transmissible to children like adults.

We looked at the cohort of hospitalized patients from the CDC site, and Public Health is also reporting the age of the patients is relatively younger. Ninety-seven percent or more are unvaccinated who are hospitalized. The vaccine protects from severe disease which generally means you require hospitalization. Severe disease is prevented even with the Delta variant, for a large part, if one is vaccinated. The 18- to 49-year-old populations are a larger percentage overall which is younger from the CDC site which shows the surge that occurred in the winter that occurred just prior to vaccination of the nation. The percentage overall of children and young people is higher than it has been in the past. The 65 and older, a large majority have been vaccinated.

The California variant has been overtaken, initially by the B.1.1.7 UK variant now called the Alpha, and the 1.617.2 variant up from India now called Delta. The Delta is the large majority of the variants that are occurring, and again data suggests that current vaccine protects you from severe disease. So, that is very clear by the data that greater than 97% of all the admissions currently are unvaccinated cohort.

The LA County Public Health have vaccinated almost 11 million persons, 88% of seniors have at least one dose, and 78% are fully vaccinated.

For Commission's information, the data team receives information from California Public Health polling of hospitals and review daily. The Modeling team currently has no plans to reinstitute modeling at this time. It is felt through continued vaccination efforts that will help stay ahead of this variant, which is continuing to slope, and we are watching it.

Questions were raised about what makes the Delta variant more transmissible, and if it was viral loads; if people who have been vaccinated completely are still getting COVID-19; and if there is a policy on vaccination requirements for providers.

Dr. Gausche-Hill responded that alterations in the spike protein helps it enter the cell, and if it has greater ability to enter the cell, then you do have higher viral loads. Generally, the high viral loads are associated with severity. The current vaccines are developed based on a native configuration of the spike protein, and so therefore it may enter but it does not have the same ability to cause severe disease because there is enough protection recognition of the protein configuration of the original virus to prevent severe disease.

People who have been vaccinated completely are getting COVID-19, but they are not getting serious disease. At least with the Delta variant, the protection is above 70-85%, so it is good. And so, although we are still seeing people get infected with the Delta variant, we are not seeing the severity of disease which is fantastic, (in >90%) so it is certainly protective.

The County released a health order that all healthcare workers should be immunized against seasonal influenza – prior to COVID-19, and during COVID-19 we received approval from the State for both EMTs and paramedics to participate in vaccination programs. There is no current mandate for healthcare workers to be vaccinated; however, there is a consideration for a mandate in the future.

4.4 EMS Commission Membership – Vote Required

4.4.1 Paramedic Representation – California State Firefighter's Association (CSFA) to California Professional Firefighters (CPF)

Ms. Chidester reported that California Professional Firefighters' (CPF) made a request to the Board of Supervisors to change the nominating organization for paramedic representation to CPF, and remove the current nominating organization, California State Firefighter's Association (CSFA). She provided membership and representation information for California Paramedics Association, California State Firefighter's Association, and California Professional Firefighters.

Public Comment:

Jeff Meston, Executive Director of CSFA, provided membership and service representation information about CSFA, indicating they are a trade association and not a union, and commented that CSFA wants to continue as the nominating organization for paramedic representation on the EMS Commission.

Motion/Second by Commissioners Ower/Hisserich to table EMS Commission Membership changes on Paramedic Representation was approved and carried unanimously. It was requested to table until next meeting to allow for public comment from California Professional Firefighters (CPF) at the September 15, 2021 EMSC meeting as they were not available for the July 21, 2021 EMSC meeting.

BUSINESS (NEW)

4.5 EMS Commission Composition and Nominating Entity (Attachment)

Ms. Chidester discussed potential language changes and corrections to the Ordinance to clean up language and identify and specify information to include "works within Los Angeles County."

A copy of the proposed Ordinance changes will be brought back to the Commission at the September 15, 2021 meeting.

V. LEGISLATION

Ms. Chidester reported on:
AB-988 – National referral line allows 9-8-8 as a mental health crisis hotline will be heard in September 2021.

AB-7 – Private Ambulance Companies having to provide bulletproof vests and safety equipment for ambulance employees.

VI. EMS DIRECTOR'S AND MEDICAL DIRECTOR'S REPORT

CORRESPONDENCE:

Ms. Chidester reported on the following Correspondence:

6.1 (05-19-2021) Distribution: Community Hospital Long Beach 911 Receiving Designation

Congratulations to Commissioner Eugene Harris who was appointed as the President of the LA County Police Chiefs' Association, and therefore will step down as a Commissioner. Chief Harris has been very helpful.

Welcome to Chief Carl Povilaitis who will replace Chief Harris.

Commissioner Nerses Sanossian is also stepping down and Dr. Jason Tarpley will replace him to represent the American Heart Association Western Affiliates.

Commissioner Cheung asked if the Commission can have a review of psychiatric urgent care and alternate transports for EMS. Specifically, can we have a review of the numbers, the volume and outcomes of transports since it is such a new program.

Dr. Gausche-Hill expressed that we get reports from fire departments utilizing the programs, and we will get the reports from them.

Dr. Gausche-Hill reported on EMS Update through September 1, 2021, and thanked Dr. Denise Whitfield for her leadership, and the committee who worked on the EMS Update. This is mandatory for all paramedics and MICNs, and open to EMTs. We also encourage base hospitals and medical directors to participate in EMS Update 2021. There are also ongoing updates through EmergiPress.

Nichole Bosson, MD, EMS Assistant Medical Director, reported ongoing research in LA County, and gave a brief update on ECMO and IGEL for adults and children. IGEL pilot began in June 2021, an alternative device recognized in basic Scope of Practice. The purpose of the trial is to get feedback from paramedics on ease of use, impact on cardiac arrest. Approximately 26 patients are enrolled and we anticipate continuing through the end of September with a target of 120-150 patients. The findings will be shared once analysis is complete after October 1, 2021.

Working on data collaborative on stoke, cardiac issues, trauma consortium, and a few publications, study on impact COVID-19 out of hospital cardiac arrest, targeted temperature management, glucose in the field, and out of hospital cardiac arrests.

VII. COMMISSIONERS' COMMENTS / REQUESTS

None.

VIII. ADJOURNMENT:

Adjournment by Chairman Rodriguez at 2:52 pm to the meeting of September 15, 2021. Continuing by Zoom. Still following guidelines as mandated by the State and the County, until further notice will continue by Zoom.

Motion/Second by Commissioners Cheung/Uner to adjourn to the meeting of Wednesday, September 15, 2021, was approved and carried unanimously.

Next Meeting: Wednesday, September 15, 2021, 1:00-3:00pm
Join by Zoom Video Conference Call

Join Zoom Meeting

https://zoom.us/j/97565380793?pwd=L1dhaUVybnMyK2tiZE95Q29jK3RDdz09
Meeting ID: 975 6538 0793
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Recorded by:
Denise Watson
Secretary, Health Services Commission

Lobbyist Registration: Any person or entity who seeks support or endorsement from the EMS Commission on official action must certify that they are familiar with the requirements of Ordinance No. 93-0031. Persons not in compliance with the requirements of the Ordinance shall be denied the right to address the Commission for such period of time as the non-compliance exists.

County of Los Angeles • Department of Health Services
Emergency Medical Services Agency

BASE HOSPITAL ADVISORY COMMITTEE MINUTES

August 11, 2021

MEMBERSHIP / ATTENDANCE
VIA ZOOM

	REPRESENTATIVES		EMS AGENCY STAFF
☒	Carol Meyer., Chair	EMS Commission	Dr. Marianne Gausche-Hill
☐	Carole Snyder, RN., Vice Chair	EMS Commission	Dr. Nichole Bosson
☐	Atilla Uner, MD, MPH	EMS Commission	Dr. Dipesh Patel
☐	Lydia, Lam, MD	EMS Commission	Christine Clare
☐	Diego Caivano, MD	EMS Commission	Jackie Rifenburg
☒	Erick Cheung, MD	EMS Commission	John Telmos
☐	Garry Olney	EMS Commission	Cathy Jennings
☒	Rachel Caffey	Northern Region	Susan Mori
☒	Melissa Carter	Northern Region	Karen Rodgers
☒	Charlene Tamparong	Northern Region, Alternate	Gary Watson
☒	Samantha Verga-Gates	Southern Region	Dr. Denise Whitfield
☒	Laurie Donegan	Southern Region	Christine Zaiser
☒	Shelly Trites	Southern Region	Dr. Kelsey Wilhelm
☒	Christine Farnham, APCC President	Southern Region, Alternate	Natalie Greco
☒	Paula Rosenfield	Western Region	Andrea Solano
☒	Ryan Burgess	Western Region	\
☒	Susana Sanchez	Western Region, Alternate	
☒	Erin Munde	Western Region, Alternate	
☒	Laurie Sepke	Eastern Region	
☒	Alina Candal	Eastern Region	**GUESTS**
☒	Jenny Van Slyke	Eastern Region, Alternate	Dr. Saman Kashani, LACoFD
☒	Lila Mier	County Hospital Region	Yun Son Kim, LACoFD
☒	Emerson Martell	County Hospital Region	Robert Ower, Commissioner
☐	Yvonne Elizarraz	County Hospital Region, Alternate	John Hisserich, Commissioner PAAC
☐	Antoinette Salas	County Hospital Region, Alternate	Chief Povilaitis, Glendale PD
☒	Shira Schlesinger, MD	Medical Council Representative	Jim Lott, Commissioner DAC
☐	Roger Yang, MD	Medical Council Representative, Alt.	
☐	Alec Miller	Provider Agency Advisory Committee	
☒	Jennifer Nulty	Provider Agency Advisory Committee, Alt.	
☐	Laarni Abdenoja	MICN Representative	
☒	Naomi Leland	MICN Representative, Alt.	
☐	Heidi Ruff	Pediatric Advisory Committee	
☒	Michael Natividad	Pediatric Advisory Committee, Alt.	

	PREHOSPITAL CARE COORDINATORS		
☒	Jessica Strange (SJS)	☒	Lorna Mendoza (SFM)
☒	Melissa Turpin (SMM)	☐	Karyn Robinson (GWT)
☐	Coleen Harkins (AVH)	☐	Erica Candelaria (QVH)

1. **CALL TO ORDER:** The meeting was called to order at 1:01 P.M. by Carol Meyer, Chairperson.

2. **APPROVAL OF MINUTES**: The meeting minutes for June 9, 2021, were approved as submitted.

M/S/C (Burgess/Donegan)

3. INTRODUCTIONS/ANNOUNCEMENTS:

Dr. Marianne Gausche-Hill provided all Introductions/Announcements.

- Los Angeles Public Health has issued a health order mandating all EMS personnel receive the COVID-19 vaccine and be fully vaccinated by September 30, 2021. Because EMS personnel were not included in the State Health order, this has caused some confusion. Additional information to come.

3.1 National Pediatric Readiness Project (NPRP)

The National Pediatric Readiness Project is a national coalition of major organizations that care for children in emergency settings, with a goal to improve pediatric emergency care in the pre-hospital and hospital environment.

Hospitals across the nation have the opportunity to take part in the National Pediatric Readiness Assessment, which is based on the 2018 guidelines. With participation, each hospital will receive a score (0-100) which can be compared to the national average of like hospitals, and a gap analysis which highlights pediatric readiness strengths and quality improvement opportunities.

Only one NPRP assessment can be submitted per hospital. It is recommended that either the Emergency Department (ED) Medical Director or ED Nurse Manager along with the Pediatric Liaison Nurses PdLN, if applicable, complete the assessment. The last day to submit the survey has been extended to August 31, 2021, visit www.pedsready.org.

3.1.1 Pediatric Emergency Care Coordinator Workforce Collaborative

Introduction of the Pediatric Emergency Care Coordinator Work Collaborative, a group of subject matter experts working with participating hospitals, to improve emergency care of the pediatric patient. Emergency Physicians, Pediatric Emergency Care Coordinators (PECC) or Pediatric Liaison Nurses (PDLN), and EMS Provider Agencies are encouraged to join. Deadline to sign up is August 15, 2021, participation is free, sign up at link below.

https://emscimprovement.center/collaboratives/pwdc/spread-the-word
https://emscimprovement.center/collaboratives/pwdc/

- Recent publication: *Utility of Glucose Testing and Treatment of Hypoglycemia in Patients with Out-of-Hospital Cardiac Arrest,* by Tiffany M. Abramson, Nichole Bosson, Angelica Loza-Gomez, Marc Eckstein & Marianne Gausche-Hill https://doi.org/10.1080/10903127.2020.1869873

4. REPORTS & UPDATES:

4.1 EMS Update 2021

EMS Update 2021 is in progress and must be completed by September 1, 2021. Prehospital Care Coordinators (PCC) can refer to weekly updates regarding completion.

4.2 EmergiPress

The next edition of EmergiPress will be available at the end of August.
Also available on the APS portal: *Sirens of Silence,* a program providing information and training on Autism Spectrum Disorder (ASD) and managing patients with ASD. CE is available.

Continue to submit feedback and suggestions for future topics to Dr. Denise Whitfield DWhitfield@dhs.lacounty.gov.

4.3 ECMO Pilot

The ECMO Pilot continues, thus far 4 patients have been enrolled. Participating hospitals include Ronald Reagan UCLA Medical Center (UCL), Cedars Sinai Medical Center (CSM), and LAC+USC Medical Center (USC). Participating EMS providers include Beverly Hills FD, Culver City FD, specific Los Angeles County FD Stations near UCL and USC, and Los Angeles FD Stations near USC. Further expansion will include Santa Monica FD with transport to UCL for which a start date has yet to be determined.

As a reminder, EMS providers will contact the Base at the ECMO receiving center directly. However, if a Base Hospital that is not an ECMO receiving center should receive notification for a patient that may benefit from ECMO, remind the provider and reroute to the closest ECMO receiving hospital, if within 30 minutes.

4.4 i-gel Pilot

The i-gel pilot continues, thus far 37 patients have been enrolled. Participants include Pasadena FD, Culver City FD, Torrance FD, and effective July 26, 2021, Los Angeles County FD (Battalions 7 and 18). During the pilot, paramedics will use the i-gel in lieu of the King LTS-D as the supraglottic airway device. The i-gel device contains a non-inflating cuff and can be left in place for up to 4 hours. We will keep you posted as additional providers are added, pilot will conclude September 30, 2021.

4.5 Data Collaboratives

Collaboratives meet on a quarterly basis to discuss and explore research opportunities, data collection, and opportunities for system improvement.

SRC Collaborative
Stroke Data Collaborative
Trauma Consortium
Pediatrics

4.6 Health Data Exchange (HDE)

Funding for the HDE project has been reallocated and project has been placed on hold until further notice.

5. OLD BUSINESS:

None

6. NEW BUSINESS:

6.1 Destination for Patients in Cardiac Arrest

The Los Angeles County EMS system is participating in the Cardiac Arrest Registry to Enhance Survival (CARES). All patients in non-traumatic cardiac arrest who meet transport criteria, must be transported to the closest SRC. There has been instances wherein EMS providers were directed by the base to transport to the MAR that is not an SRC. In these instances, necessary outcome data would not be entered into the SRC database, making it difficult to obtain all required data for CARES.

For pediatric cardiac arrest patients, the EMS Agency is working with the EDAPs and PMCs to obtain outcome data.

By participating in CARES, data is entered at the local level, SRCs can access their data and reports can be generated specific to Los Angeles County. We will also be able to benchmark our EMS system performance against other state and national EMS systems.

6.2 Comprehensive Stroke Centers – Level I and Level II (Ref. No. 501)

Ref. No. 501, 9-1-1 Receiving Hospital Directory, has been updated to reflect two levels of County Designated Comprehensive Stroke Centers (CSC):

Level I – certified as a Comprehensive Capable Stroke Center by a CMS Approved Certifying entity

Level II – certified as a Thrombectomy Capable Stroke Center by a CMS Approved Certifying entity

This DOES NOT change current stroke transport destination policies.

6.3 Ref. No. 834.1, Patient Refusal for Treatment/Transport and Treat and Release at Scene Quick Reference Guide

Ref. No. 834.1, Quick Reference Guide was developed to summarize Ref. No. 834, Patient Refusal of Treatment/Transport and Treat and Release at Scene.

Since the policy was developed from a previously approved policy (Ref. No. 834), the Committee did not feel the need to vote for approval.

6.4 Ref. No. 838, Application of Patient Restraints

Dr. Erick Cheung, Commissioner, introduced and provided background on agenda items 6.4 – 6.4.8. In response to the 2016 Commission report a subcommittee was formed to address the management of behavioral health and psychiatric emergencies.

Dr. Marianne Gausche-Hill would like to thank Dr. Erick Cheung, Dr. Denise Whitfield, Dr. Patrick Kelly and all of the subcommittee members for their contribution and efforts.

Ref. 838: Approved with recommended change: Principles 6, correction “shall be coordinated be law enforcement (LE),” to say, “ shall be coordinated by law enforcement (LE),”

M/S/C (Burgess/Kim)

6.4.1 Ref. No. 1208, Agitated Delirium

Approved with recommended correction: Special Considerations 3, “Patients who remain agitated while in physical restraint…” to say, “Patients who remain agitated while in physical restraint…”

M/S/C (Farnham/Burgess)

6.4.2 Ref. No. 1208-P, Agitated Delirium

Approved as presented.

M/S/C (Farnham/Burgess)

6.4.3 Ref. No. 1209, Behavioral/Psychiatric Crisis

Approved with recommended corrections/changes: Page 1, 2. “Attain law enforcement assistance for assistance prior to approaching…” to say, “Attain law enforcement for assistance prior to approaching…”

Page 1, 7., At the end of Olanzapine sentence, change special consideration 8 to special consideration 7.

Move Autism from Psychosis heading to new heading Autism Spectrum Disorder.

Lengthy discussion ensured regarding the use, indications and education of Olanzapine.

M/S/C (Farnham/Burgess)

6.4.4 Ref. No. 1209-P, Behavioral/Psychiatric Crisis

Approved with recommended corrections: Page 2, 16. change “Patient” to “Patients”

Page 4, number 8, 9, 10, are duplicates

Page 5, number 10, 11, are duplicates

M/S/C (Farnham/Burgess)

6.4.5 Ref. No. 1307, Care of the Patient with Agitation

Approved as presented.

M/S/C (Farnham/Carter)

6.4.6 Ref. No. 1307.1, Flowchart of Initial Approach to Scene Safety

Approved as presented.

M/S/C (Farnham/Carter)

6.4.7 Ref. No. 1307.2, Verbal De-Escalation

Approved as presented.

M/S/C (Farnham/Carter)

6.4.8 Ref. No. 1307.3, Table of Common Etiologies of Agitation, Field Presentation, Likelihood Verbal De-Escalation

Approved as presented.

M/S/C (Farnham/Carter)

6.4.9 Ref. No. 1318, Evaluation and Care of Suicide Risk Patient

Approved as presented.

M/S/C (Farnham/Sepke)

6.4.10 Ref. No. 1318.1, Suicide Risk Screening (C-SSRS)

Approved as presented.

M/S/C (Farnham/Sepke)

6.5 Ref. No. 1317.9, MCG, Drug Reference – Atropine

Dose change will reflect on Ref. No. 1212, Cardiac Dysrhythmia – Bradycardia

Approved as presented.

M/S/C (Burgess/Donegan)

6.6 Ref. No. 620, EMS Quality Improvement Program

Approved as presented

M/S/C (Farnham/Burgess)

7. OPEN DISCUSSION:

None

8. **NEXT MEETING:** BHAC's next meeting is scheduled for **October 13, 2021**, location is to be determined.

   ACTION: Meeting notification, agenda, and minutes to be distributed electronically prior to the meeting.

   ACCOUNTABILITY: Lorrie Perez

9. **ADJOURNMENT:** The meeting was adjourned at 3:00 P.M.

EMERGENCY MEDICAL SERVICES COMMISSION
DATA ADVISORY COMMITTEE
WEDNESDAY, August 11, 2021

EMERGENCY MEDICAL SERVICES AGENCY
LOS ANGELES COUNTY

MEMBERSHIP / ATTENDANCE		
MEMBERS	ORGANIZATION	EMS AGENCY
☒ Jeffrey Rollman, Chair	EMS Commissioner (Southern California Public Health Assn.)	Christine Clare
□ Joe Salas, Vice Chair	EMS Commissioner (Public Member, 1st District)	John Telmos
□ Nerses Sanossian	EMS Commissioner (AHA/Western States Affiliate)	Susan Mori
□ Jim Lott	EMS Commissioner (Public Member, 2nd District)	Laura Leyman
☒ Gloria Molleda	EMS Commissioner (League of Calif. Cities/LA County Division)	Kelsey Wilhelm
□ Gary Washburn	EMS Commissioner (Public Member, 5th District)	
□ Matt Armstrong	Ambulance Advisory Board (LACAA)	
☒ Kris L. Thomas	Ambulance Advisory Board (alternate)	OTHERS
☒ Christine Farnham	Base Hospital Advisory Committee (BHAC) (RN)	
□ Shelly Trites	BHAC (alternate)	
☒ Ryan Burgess	Hospital Association of Southern California (HASC)	
□ Nathan McNeil	HASC (alternate)	
□Don Gerety	Long Beach Fire Department (LBFD)	
□ Brenda Bridwell	LBFD (alternate)	
☒ Sean Stokes	Los Angeles Area Fire Chiefs Association	
□ VACANT	LA Area Fire Chiefs Association (alternate)	
☒ Yun Son Kim	Los Angeles County Fire Department (LACoFD)	
□ VACANT	LACoFD (alternate)	
□ Matthew Potter	Los Angeles Fire Department (LAFD)	
□ John Smith	LAFD (alternate)	
☒ Marc Cohen	Medical Council (MD)	
□ VACANT	Medical Council (alternate)	
☒ Daniel Dobbs	Provider Agency Advisory Committee (PAAC)	
□ Ivan Orloff	PAAC (alternate)	
□ Tchaka Shepherd	Trauma Hospital Advisory Committee (THAC) (MD)	
□ David Hanpeter	THAC (MD) (alternate)	
☒ Marilyn Cohen	THAC (RN)	
☒ Gilda Cruz-Manglapus	THAC (RN) (alternate)	
☒ Present *Excused □ Absent		

1. **CALL TO ORDER:** The meeting was called to order at 10:03 am by Commissioner Rollman.

2. **APPROVAL OF MINUTES:** The minutes of the April 14, 2021 were approved as written.

3. **INTRODUCTIONS/ANNOUCEMENTS** *(Chris Clare)*

   - Michelle Williams, EMS Data System Manager resigned from the EMS Agency in May 2021. Sara Rasnake will be the lead for the data section.
   - Laura Leyman started in April at the EMS Agency as the SRC Program Coordinator.

4. **REPORTS & UPDATES**

   4.1 Service Changes *(Chris Clare)*

   9-1-1 Receiving Facility Closure

   Pacific Gardens Medical Center in Hawaiian Gardens, closed on June 7, 2021

   9-1-1 Receiving Facility Opening

   Community Hospital Long Beach opened as a 9-1-1 Receiving Hospital on May 24, 2021.

Specialty Services

Providence Little Company of Mary Hospital – San Pedro closed their perinatal services on July 2, 2021

4.2 Lancet by ESO Health Data Exchange *(Chris Clare)*

The Health Data Exchange (HDE) project, which is a Software as a Service platform designed to exchange pdf and native data between the hospitals and EMS providers and was presented at the DAC meeting held on August 12, 2020. The EMS Agency applied for funding though the American Rescue and Recovery Act however the Board of Supervisors has repurposed the funding to other priorities. The project is on hold for now and will be brought back in the future if funding sources are identified.

4.3 2020 EMS Annual Data Report *(Chris Clare)*

The 2020 EMS Annual Data Report was distributed. Report includes: COVID-19 hospitalizations by month and by Service Planning Area (SPA). Any suggestions for upcoming reports should be sent to Richard Tadeo. The report can also be found at http://file.lacounty.gov/SDSInter/dhs/1106985_2020EMSAnnualDataReport.PDF.

4.4 Prehospital Research Studies *(Chris Clare/Jeffery Rollman)*

Ongoing Prehospital Research Studies: *(Chris Clare)*

- Extracorporeal Membrane Oxygenation (ECMO) pilot is on-going and there have been a total of four (4) enrollments. Los Angeles Fire Department is now participating in addition to Los Angeles County, Beverly Hills and Culver City Fire Departments. LAC+USC is now participating in addition to Ronald Reagan UCLA Medical Center and Cedars Sinai Medical Center.
- The pilot project on the use of i-gel as a supraglottic airway in lieu of King-LTDs, was started in June 2021. The Fire Departments participating are Pasadena, Culver City, Torrance and two battalions for Los Angeles County. There have been 32 enrollments to date.

Recent Publications: *(Chris Clare/Jeffery Rollman)*

- Emergency Medical Services Responses to Out-of-Hospital Cardiac Arrest and Suspected ST-Segment-Elevation Myocardial Infarction During the COVID-19 Pandemic in Los Angeles County, published in the Journal of the American Heart Association. (Attached)
- Recent acceptance, not yet fully released, quantitative and qualitative study evaluating the implementation of Ref. No. 1309, Color Code Drug Doses.

Data Collaborative Projects: (*Jeffrey Rollman)*

- STEMI Receiving Center (SRC), Stroke and Trauma have several ongoing projects that are looking at the impact of COVID-19 and the specialty care centers.

4.5 COVID-19 Data Reports *(Chris Clare)*

Presented the most current Hospital COVID Assessment report. The report is updated regularly and is available on the LA County EMS Agency website. The EMS Agency will begin collecting and reporting Provider Impression data for those identified as concerning during the previous COVID-19 surges – Non-Traumatic Cardiac Arrest (CANT) and Respiratory Distress Other (RDOT) from August 15, 2021 onward. This report will also be posted on the EMS Website.

4.6 Cardiac Arrest Registry for Enhanced Survival (CARES) *(Chris Clare)*

CARES is a National registry that evaluates the care provided to patients who experience an Out of Hospital Cardiac Arrest (OHCA). The EMS Agency began entering both EMS and hospital data in June for patients with an OHCA from January 1, 2021 onward. EMS data for Los Angeles, Glendale and Los Angeles County Fire Departments is entered into the Registry by the Fire Department and the EMS Agency enters the hospital data from the SRC database. For all other Fire Departments, the EMS Agency enters both the EMS and hospital data. The EMS Agency obtains OHCA outcome data from Emergency Department Approved for Pediatrics (EDAP) for pediatric cardiac arrests as their information is not entered into the SRC database.

5. UNFINISHED BUSINESS

5.1 CF/CI Data Submission *(Chris Clare)*

Los Angeles County Fire Department (CF): Has submitted data through June 30, 2021. We have not received all of the records for October and November 2020 and are working with their vendor, ImageTrend to provide the missing records.

Los Angeles City Fire (CI): As of August 11, 2021, CI is current with data submission through June 2020. CI is having ongoing issues and are working with their vendor, Stryker, to resolve the issues.

6. NEW BUSINESS

6.1 Future Agenda Items

Extensive discussion regarding what the focus of Data Advisory Committee (DAC) should be moving forward.

- Members expressed that the information shared is duplicative and that the original charter of DAC has been relegated to other meetings. Additionally, more than 50% of the meetings have been cancelled due to no agenda items for many years.

There was a motion to investigate what the process would be to change DAC to an ad hoc committee, similar to what occurred with Education Advisory. Chris Clare will work with EMS Leadership and Chairman Rollman to determine next steps.

7. NEXT MEETING: October 13, 2021 at 10:00 a.m. via Zoom

8. ADJOURNMENT: The meeting was adjourned at 11:01 am by Commissioner Rollman.

EMERGENCY MEDICAL SERVICES AGENCY
LOS ANGELES COUNTY

DATA FACTS

LOS ANGELES COUNTY EMS SYSTEM REPORT

MAY 1, 2021

ISSUE 9

Message from the Director and Medical Director

We are dedicating this issue of the EMS System Report to Michele Williams, Chief, Data Systems Management for our agency. Michele has worked with the EMS Agency for the past 9 years. She has served as the lead of our Data Management Section since 2018. Michele has been instrumental in moving the EMS Agency and our system to electronic data collection, ensuring data quality and consistency, and educating our providers and hospitals on the importance of quality data to direct our system and patient care.

Cathy Chidester
Director

Michele worked tirelessly, starting from scratch, to evolve our system from a predominantly pen and paper system to the 100% electronic system we have today. She has worked with each provider agency, hospital and digital system to convert LA County over to an entirely new platform. Her understanding of data management has enabled us to utilize this critical information to make vital decisions and conduct quality improvement and research on behalf of the over 10 million people who live in and visit our county. She dedicated countless hours this past year collecting and verifying COVID hospital assessment data which was critical to the county's understanding of the pandemic and provided support to policy decisions.

Dr. Marianne Gausche-Hill
Medical Director

Michele has recently left our EMS Agency to pursue personal goals. Her talent and drive will be sorely missed. I hope you will join us in wishing Michele the best in her new endeavors and thanking her for instilling excellence in our EMS program and systems.

INSIDE THIS ISSUE:

SPECIAL POINTS OF INTEREST:

- EMS Mechanisms of Injury (pages 6 & 7)
- ED Disposition and Patient Type (page 11)
- Injury Severity Scores (pages 14-15)
- Paramedic Base Hospital Contact Volume (page 20)

2020 System Demographics

70 9-1-1 Receiving Hospitals

- 38 EDAP (Emergency Department Approved for Pediatrics)
- 10 Pediatric Medical Centers
- 7 Pediatric Trauma Centers
- 15 Trauma Centers
- 21 Paramedic Base Hospitals
- 36 STEMI Receiving Centers
- 18 Comprehensive Stroke Centers
- 34 Primary Stroke Centers
- 54 Perinatal Centers
- 44 Hospitals with Neonatal Intensive Care Unit
- 8 SART (Sexual Assault Response Team)
- 13 Disaster Resource Centers

EMS Provider Agencies

- 31 Public Safety EMS Provider Agencies
- 34 Licensed Basic Life Support Ambulance Operators
- 17 Licensed Advanced Life Support Ambulance Operators
- 20 Licensed Critical Care Transport Ambulance Operators
- 6 Licensed Ambulette Operators

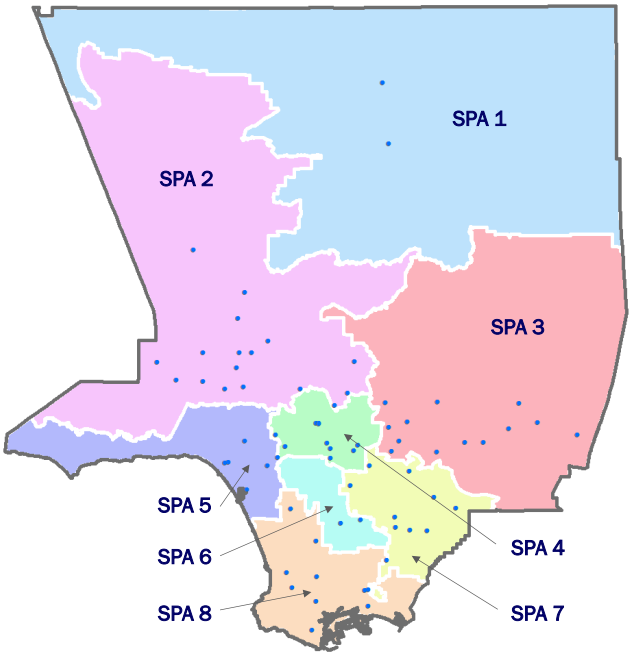
EMS Practitioners

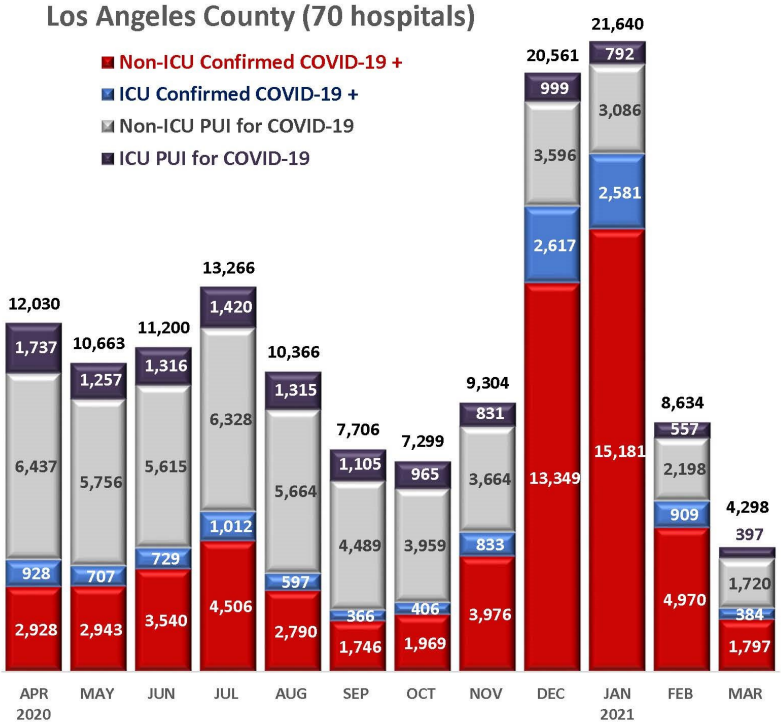
- 4,512 Accredited Paramedics
- 8,123 Certified EMTs by LA Co EMS Agency
- 883 Certified Mobile Intensive Care Nurses

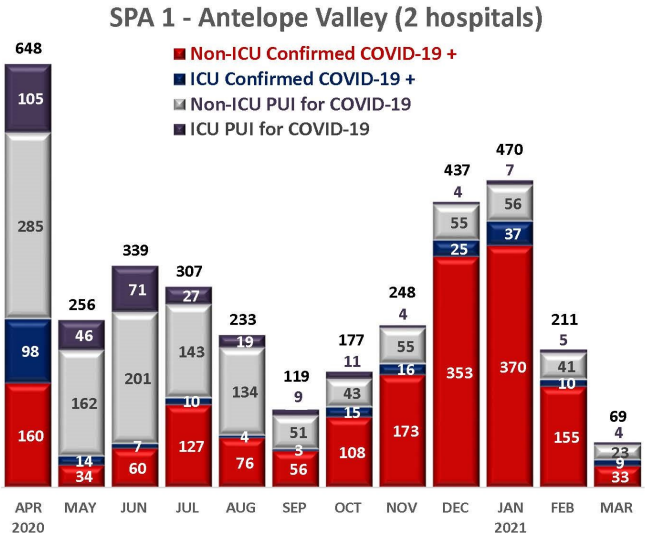
COVID-19 Hospitalizations by Month and by Service Planning Area (SPA)

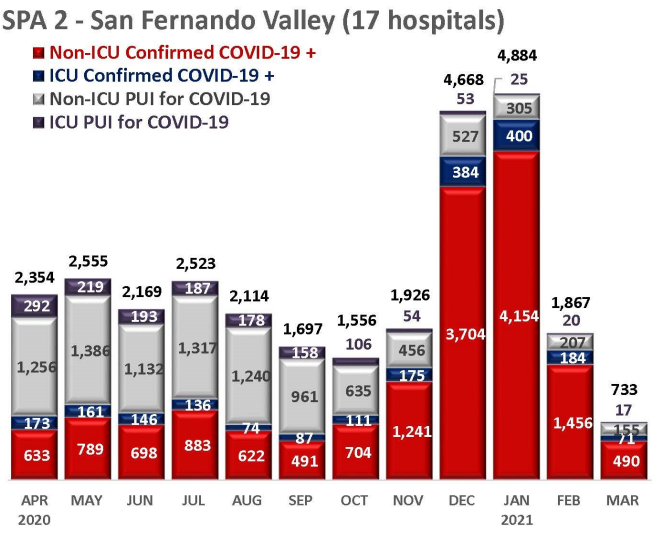
Confirmed and Person Under Investigation (PUI)

(Age 15 years and older)

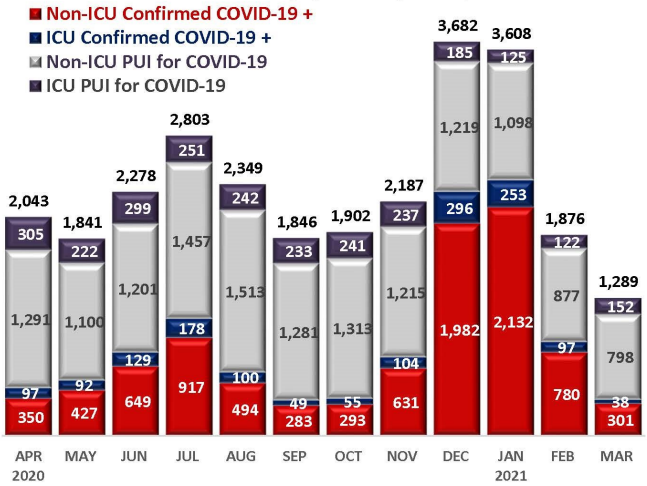




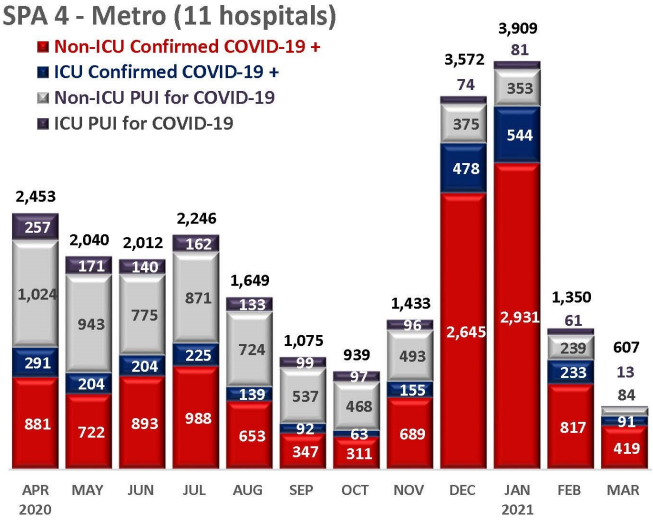




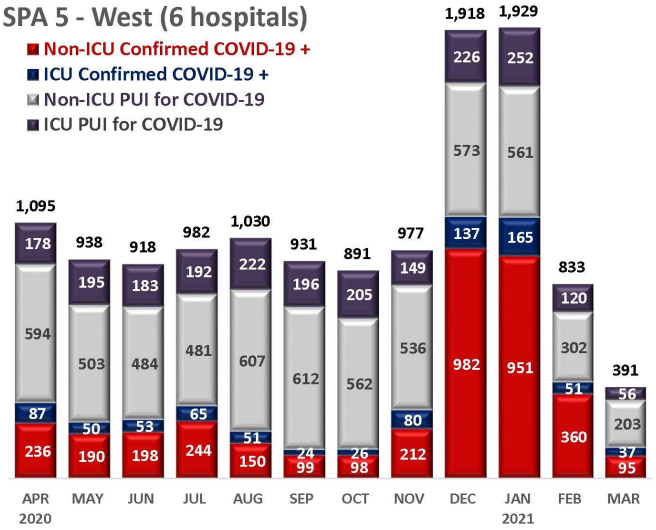
SPA 3 - San Gabriel Valley (13 hospitals)



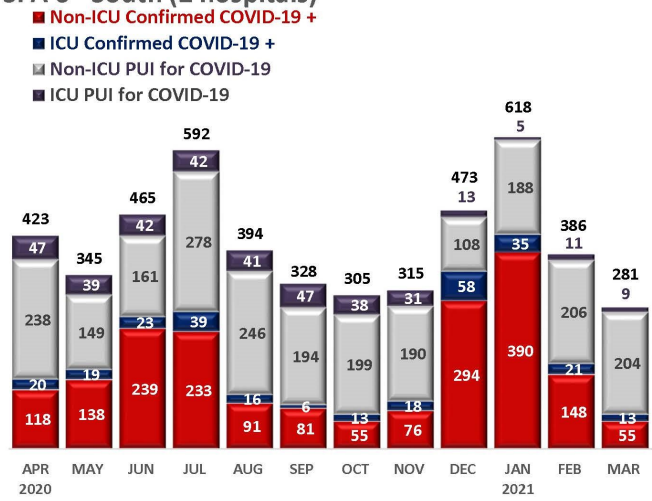
SPA 4 - Metro (11 hospitals)



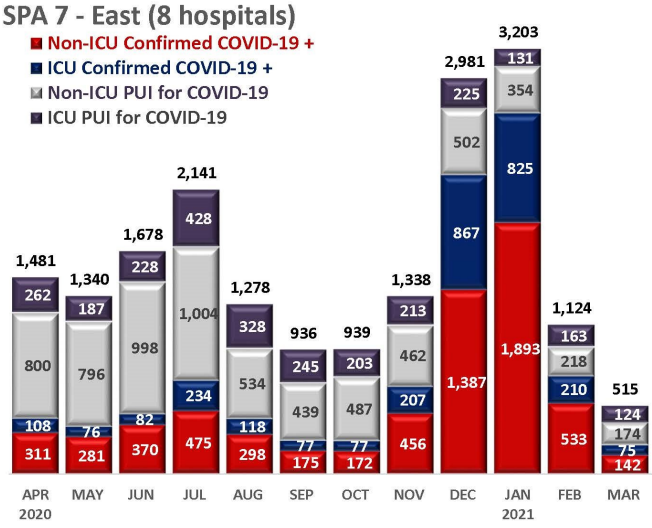
SPA 5 - West (6 hospitals)



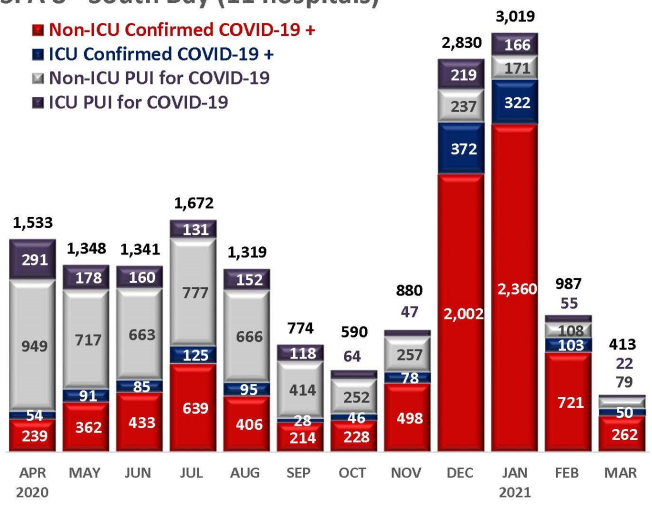
SPA 6 - South (2 hospitals)



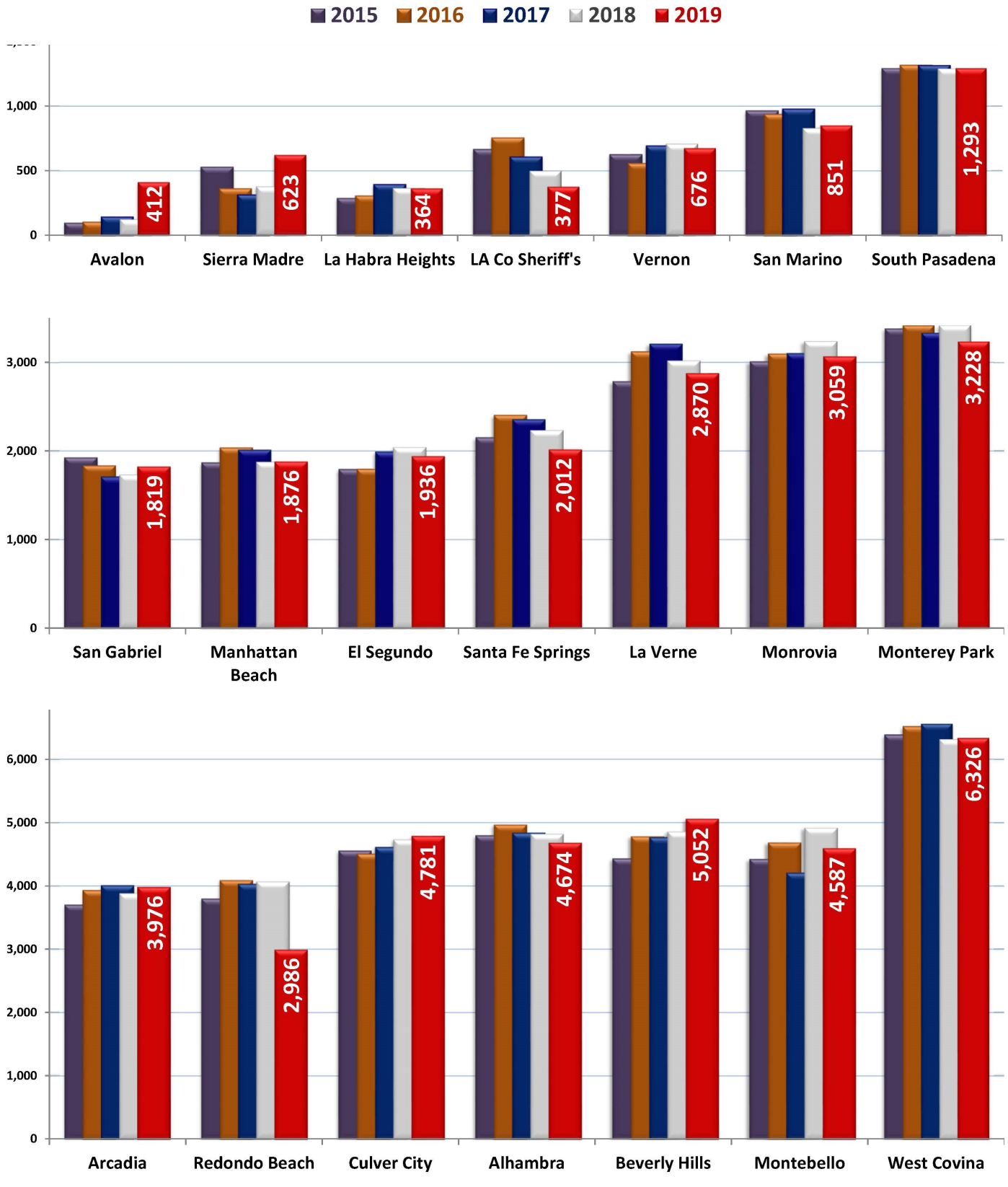
SPA 7 - East (8 hospitals)



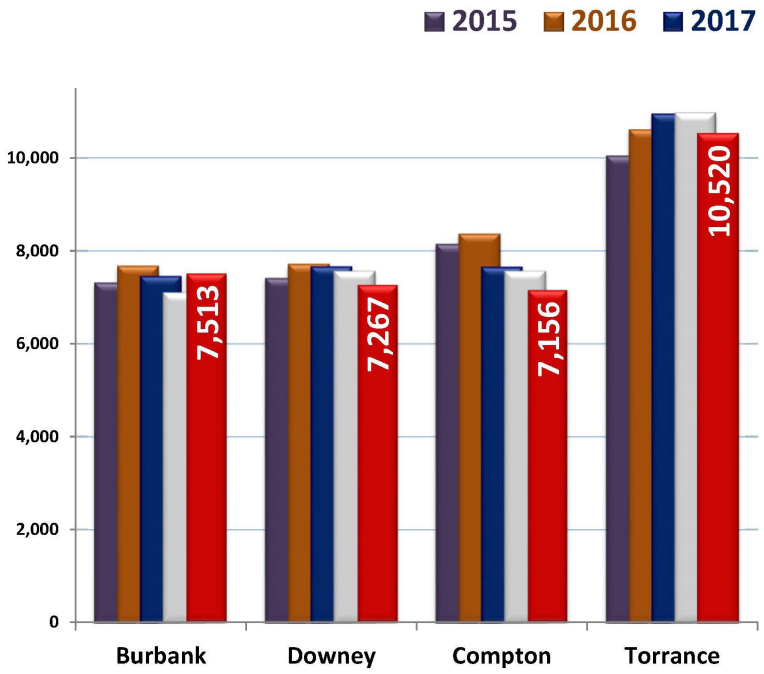
SPA 8 - South Bay (11 hospitals)

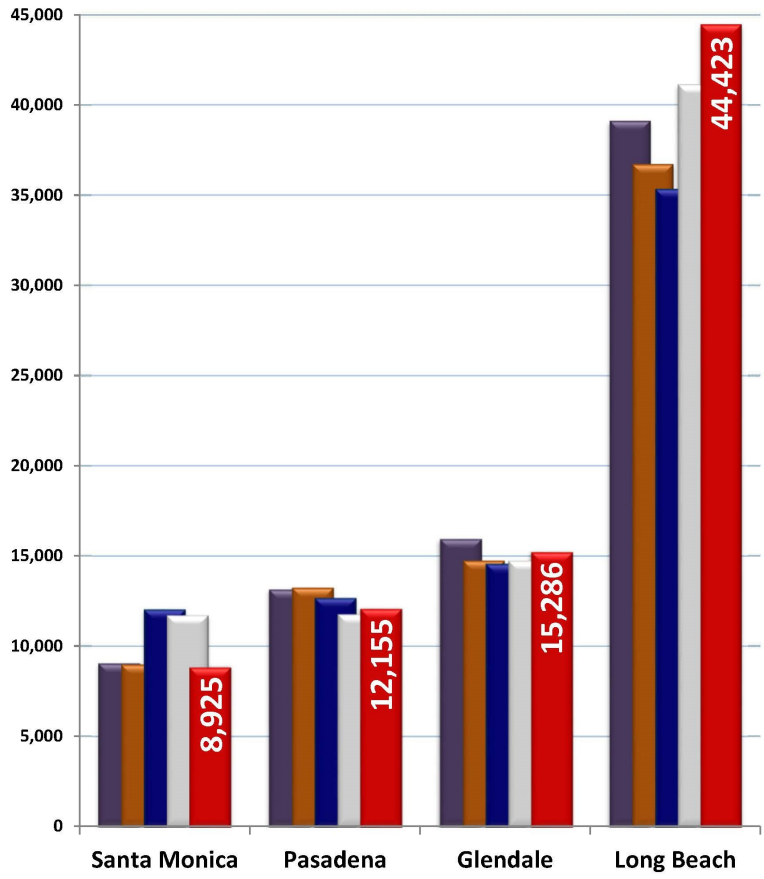


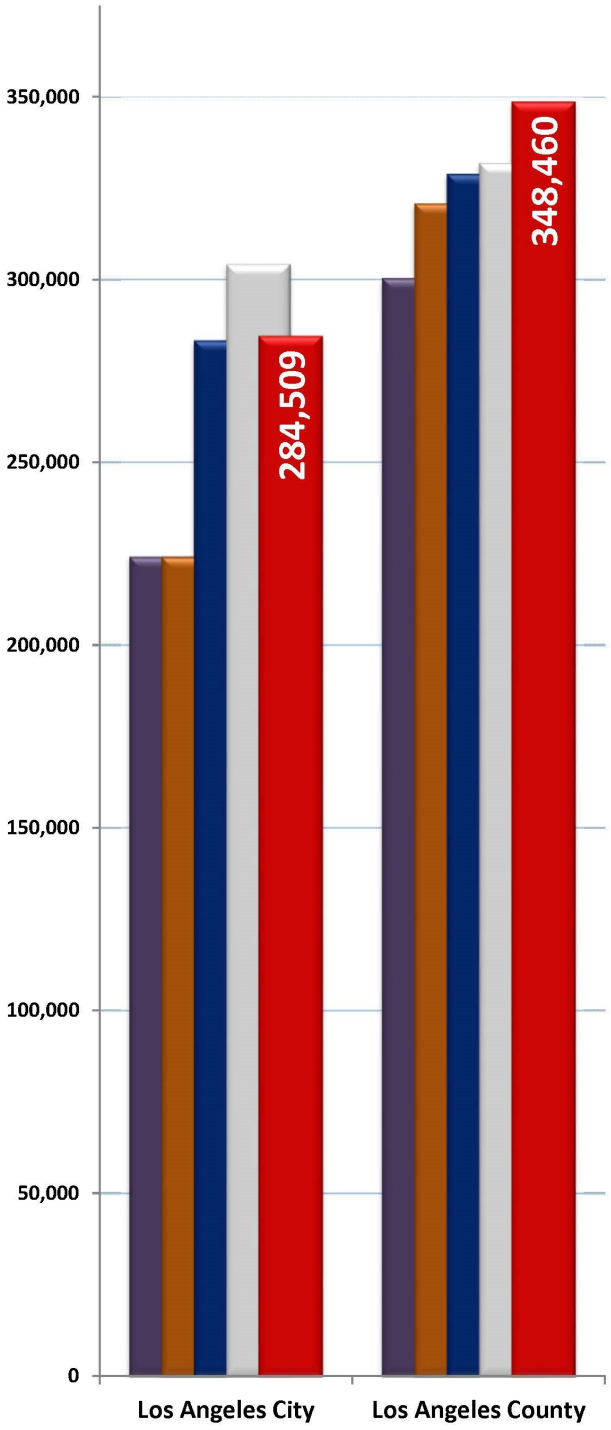
EMS Responses by 9-1-1 Jurisdictional Provider Agency



EMS Responses by 9-1-1 Jurisdictional Provider Agency







ADULT PROVIDER IMPRESSIONS (TOP 10)	2018	%	2019	%
Traumatic Injury	127,585	16%	112,114	14%
Behavioral / Psychiatric Crisis	59,823	7%	58,874	8%
Weakness - General	57,031	7%	53,333	7%
No Medical Complaint	55,124	7%	47,817	6%
Body Pain - Non-Traumatic	40,734	5%	43,654	6%
Abdominal Pain/Problems	37,592	5%	32,584	4%
Altered Level of Consciousness	31,245	4%	27,743	4%
Syncope / Near Syncope	26,312	3%	24,268	3%
Seizure - Postictal	23,159	3%	19,299	2%
Chest Pain - Suspected Cardiac	21,582	3%	17,947	2%
TOTAL - Top 10 Provider Impressions	480,742	59%	437,633	56%
TOTAL - Adult EMS Responses	819,320		777,556	

ADULT TRANSPORTS (TOP 10)	2018	%	2019	%
Traumatic Injury	83,518	16%	78,521	15%
Weakness - General	44,777	9%	42,942	8%
Behavioral / Psychiatric Crisis	41,367	8%	41,430	8%
Altered Level of Consciousness	34,109	6%	27,293	5%
Abdominal Pain / Problems	33,801	6%	30,062	6%
Body Pain - Non-Traumatic	33,547	6%	37,076	7%
Chest Pain - Suspected Cardiac	20,316	4%	17,411	3%
Syncope / Near Syncope	19,833	4%	19,136	4%
Respiratory Distress - Other	16,386	3%	16,558	3%
Seizure - Postictal	16,355	3%	17,205	3%
TOTAL - Top 10 Adult EMS Transports	344,009	65%	327,634	62%
TOTAL - Adult EMS Transports	526,568		527,233	

ADULT MECHANISMS OF INJURY (TOP 10)	2018	%	2019	%
Fall	45,502	34%	39,706	32%
Motor Vehicle Accident	36,039	27%	38,292	31%
Assault	16,544	12%	13,315	11%
Pedestrian/Bicycle struck by Motor Vehicle	8,561	6%	8,968	7%
Animal Bite	1,913	1%	2,473	2%
Sports / Recreational	2,164	2%	1,940	2%
Motorcycle / Moped Accident	2,378	2%	1,582	1%
Stabbing	1,485	1%	1,573	1%
Gunshot Wound	1,577	1.2%	1,462	1.2%
Accidental Self-Inflicted Injury	1,000	0.8%	1,100	0.9%
TOTAL - Top 10 Adult Mechanisms of Injury	117,163	88%	110,411	88%
TOTAL - Adult Mechanisms of Injury	132,868		125,465	

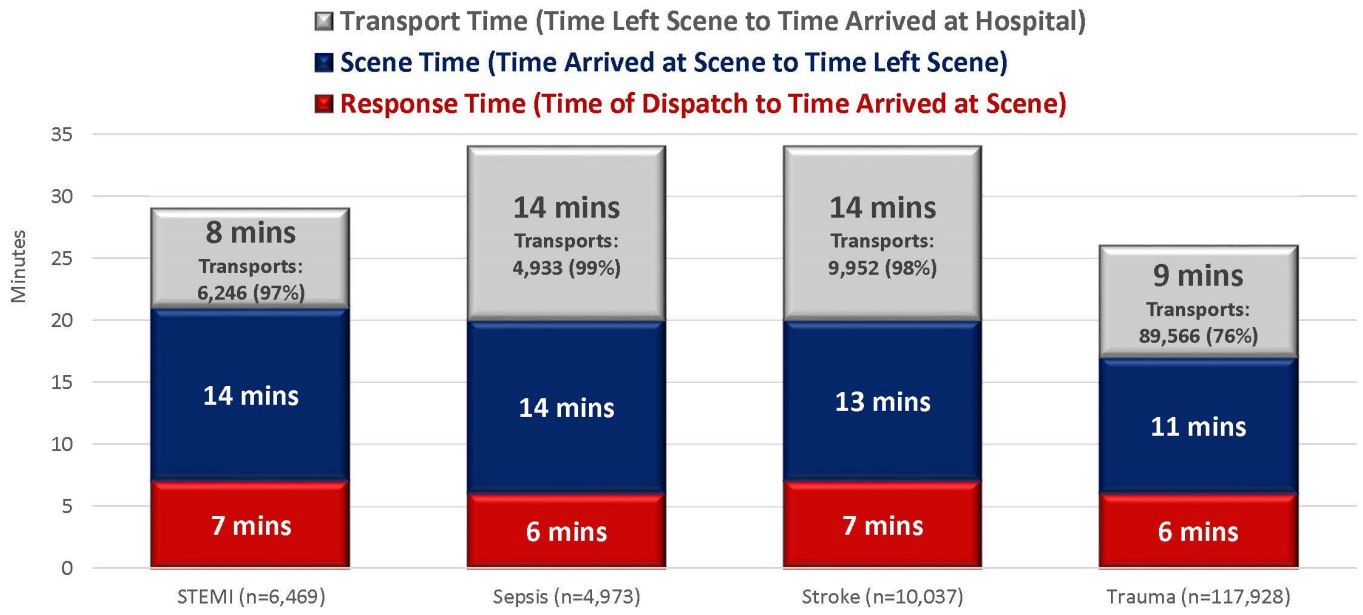
PEDIATRIC PROVIDER IMPRESSIONS (TOP 10)	2018	%	2019	%
Traumatic Injury	8,559	23%	8,234	23%
No Medical Complaint	5,377	15%	4,709	13%
Seizure - Postictal	4,533	12%	4,988	14%
Behavioral / Psychiatric Crisis	1,860	5%	1,827	5%
Cold / Flu	1,690	5%	1,771	5%
Fever	1,531	4%	1,467	4%
Respiratory Distress - Other	1,038	3%	1,050	3%
Respiratory Distress - Bronchospasm	1,026	3%	1,066	3%
Syncope / Near Syncope	989	3%	1,014	3%
Nausea / Vomiting	913	2%	907	3%
TOTAL - Top 10 Pediatric EMS Responses	27,516	75%	27,033	75%
TOTAL - Pediatric EMS Responses	36,919		36,151	

PEDIATRIC TRANSPORTS (TOP 10)	2018	%	2019	%
Traumatic Injury	5,328	22%	5,108	22%
Seizure - Postictal	4,234	18%	4,551	19%
Behavioral / Psychiatric Crisis	1,270	5%	1,166	5%
Fever	1,074	4%	1,023	4%
Cold / Flu	982	4%	947	4%
Respiratory Distress - Bronchospasm	855	4%	890	4%
Respiratory Distress - Other	848	4%	853	4%
Syncope / Near Syncope	784	3%	736	3%
Allergic Reaction	641	3%	636	3%
Seizure - Active	596	2%	567	2%
TOTAL - Top 10 Pediatric EMS Transports	16,612	69%	16,477	70%
TOTAL - Pediatric EMS Transports	24,031		23,517	

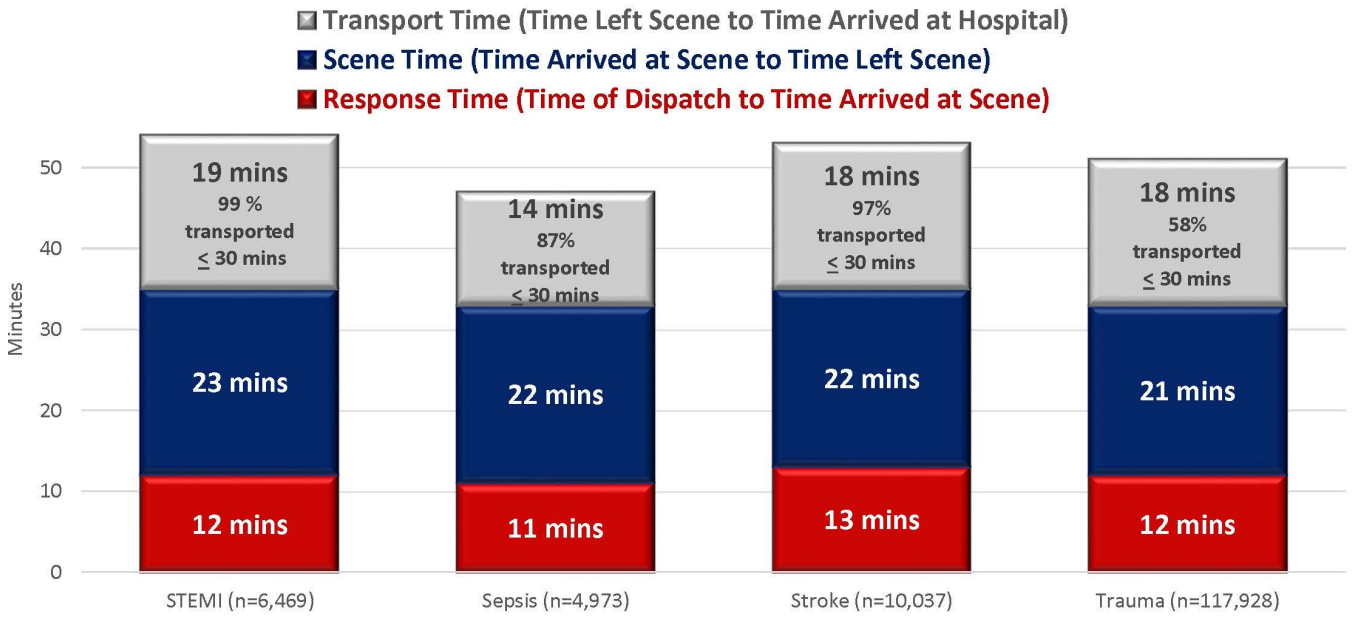
PEDIATRIC MECHANISMS OF INJURY (TOP 10)	2018	%	2019	%
Fall	3,215	31%	2,859	28%
Motor Vehicle Accident	2,503	24%	2,882	28%
Sports / Recreational	789	8%	758	7%
Pedestrian/Bicycle struck by Motor Vehicle	728	7%	778	8%
Animal Bite	328	3%	452	4%
Assault	475	5%	449	4%
Accidental Self-Inflicted Injury	133	1%	160	2%
Thermal Burn	93	1%	112	1%
Intentional Self-Inflicted Injury	44	0.4%	33	0.3%
Crush Injury	34	0.3%	29	0.3%
TOTAL - Top 10 Pediatric Mechanisms of Injury	8,342	80%	8,512	84%
TOTAL - Pediatric Mechanisms of Injury	10,416		10,123	

2019 EMS Times: Adult (Median)

LA County EMS Transport Time of ADULT Patients with Provider Impressions STEMI, Stroke, Sepsis and Traumatic Injuries

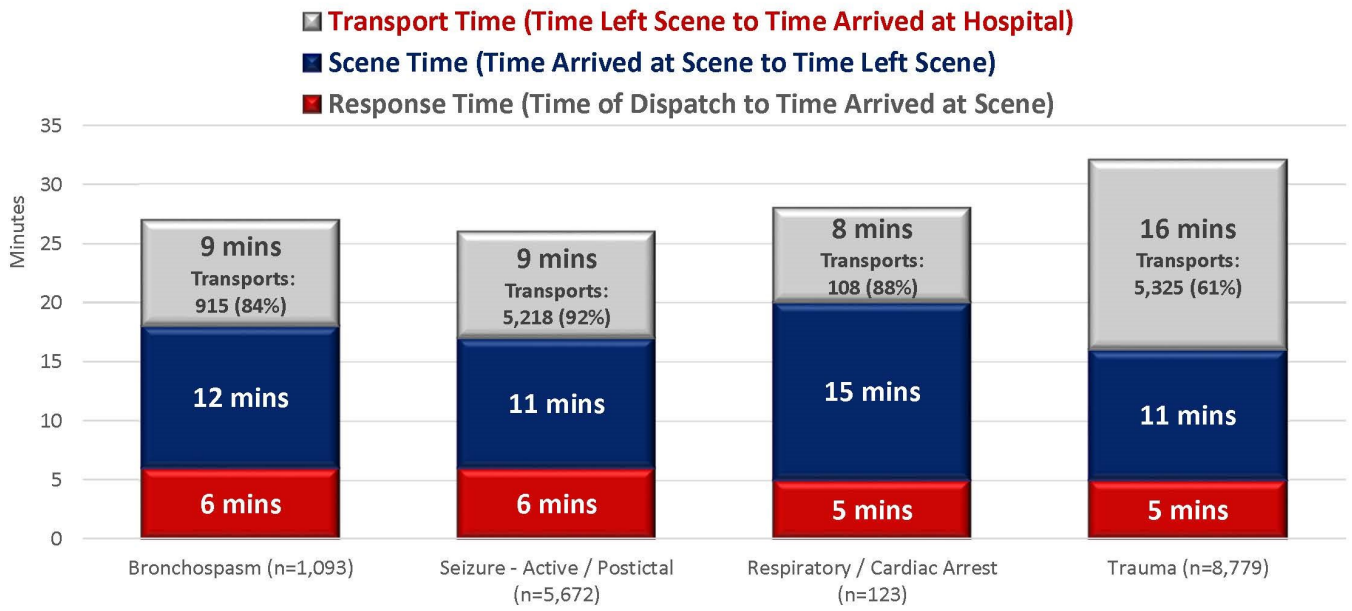


2019 EMS Times (90th Percentile)

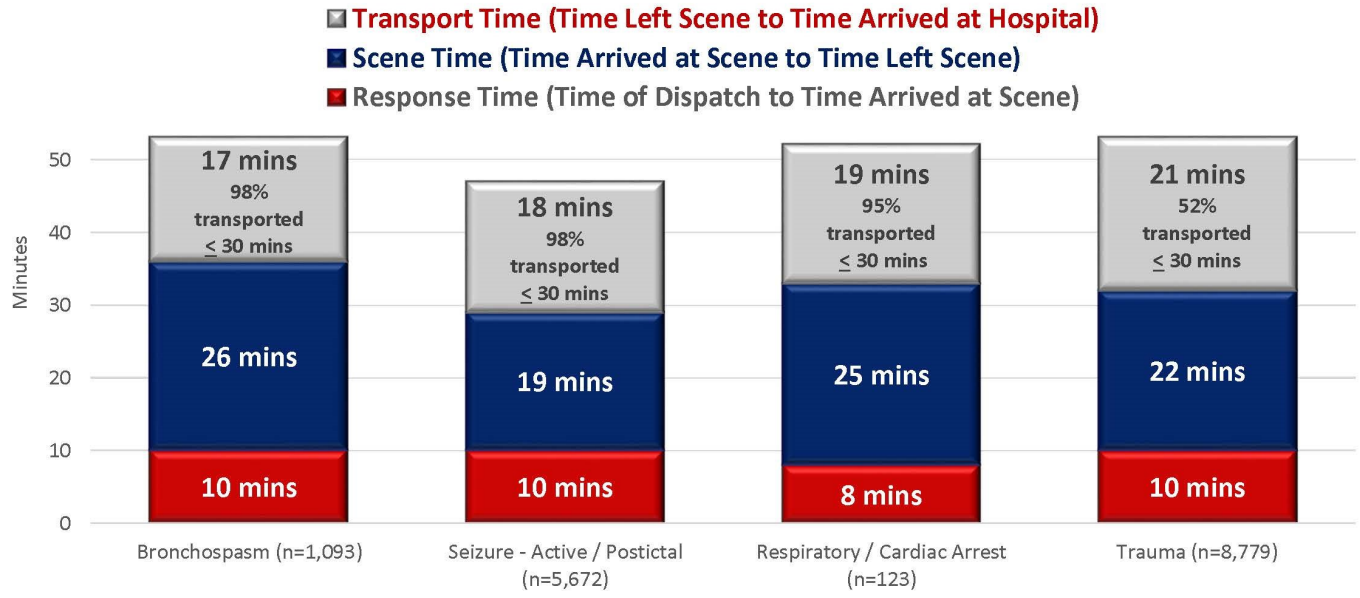


2019 EMS Times: Pediatric (Median)

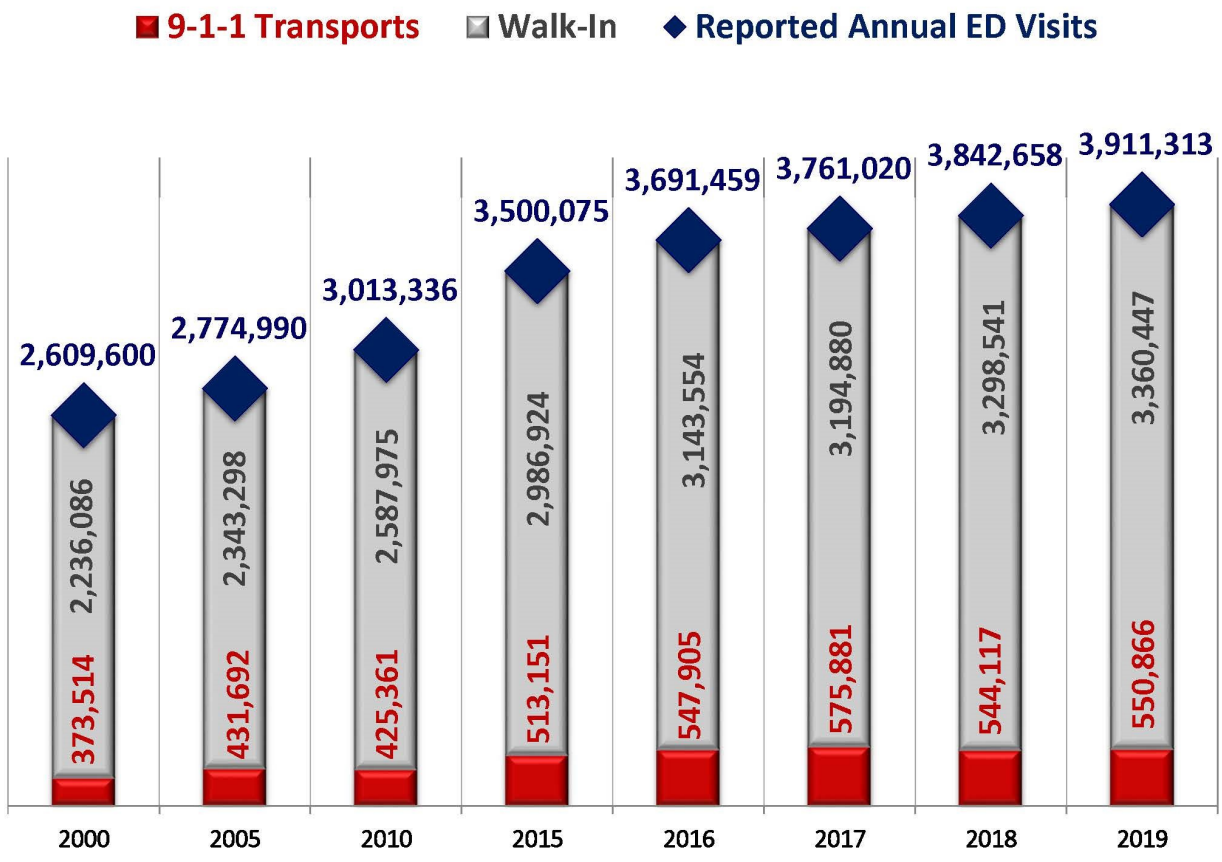
LA County EMS Transport Time PEDIATRIC Patients with Provider Impressions Bronchospasm, Seizure, Respiratory/Cardiac Arrest and Traumatic Injuries



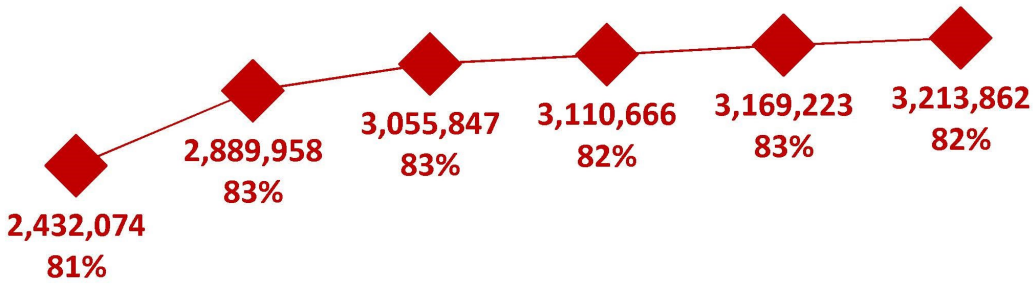
2019 EMS Times: Pediatric (90th Percentile)



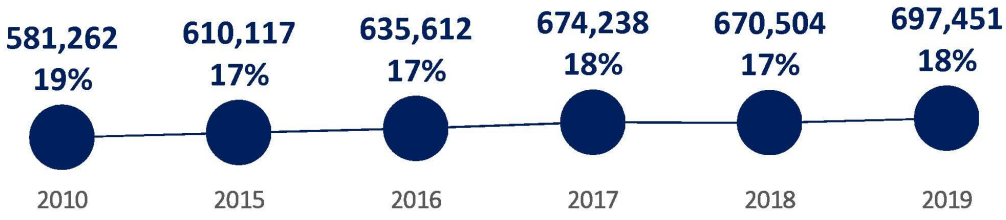
Emergency Department Volume



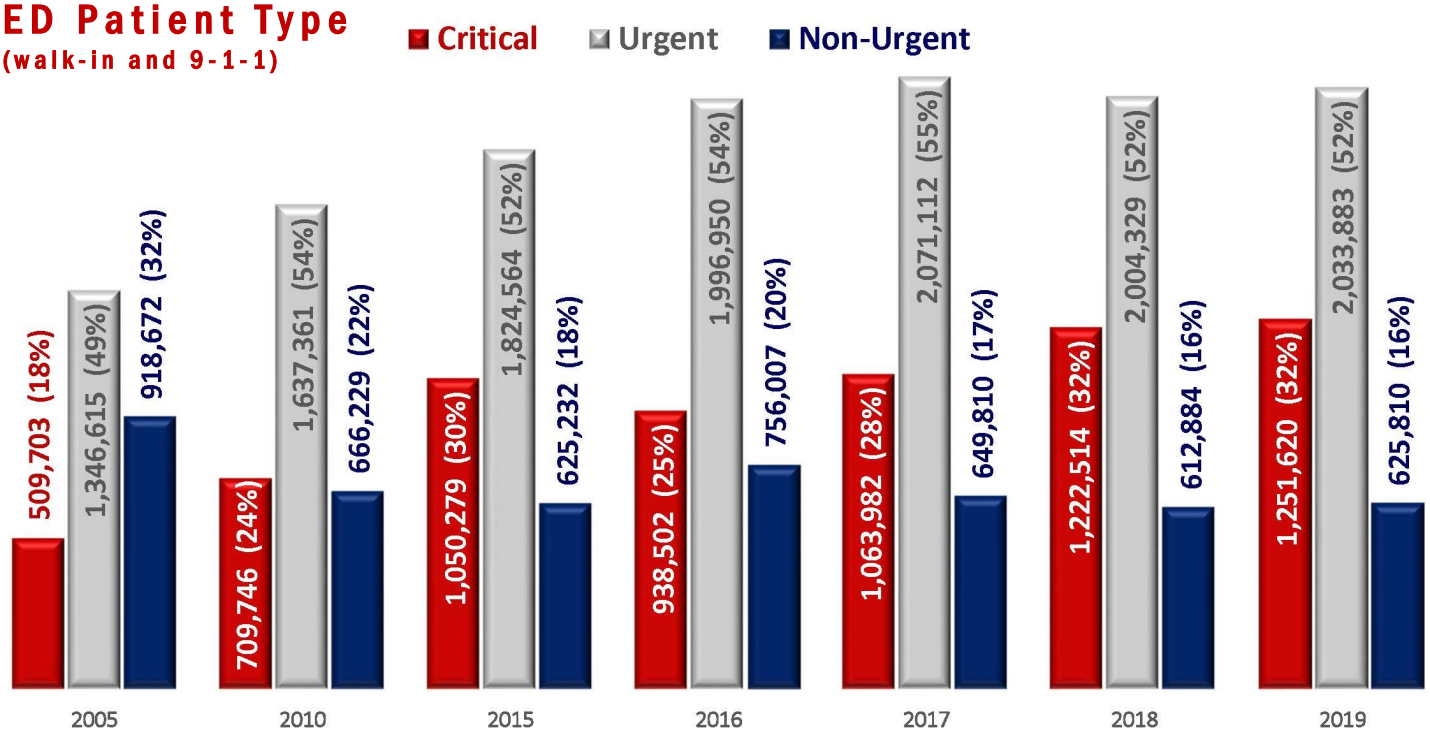
Adult:
15 years and older



Pediatric:
14 years and younger

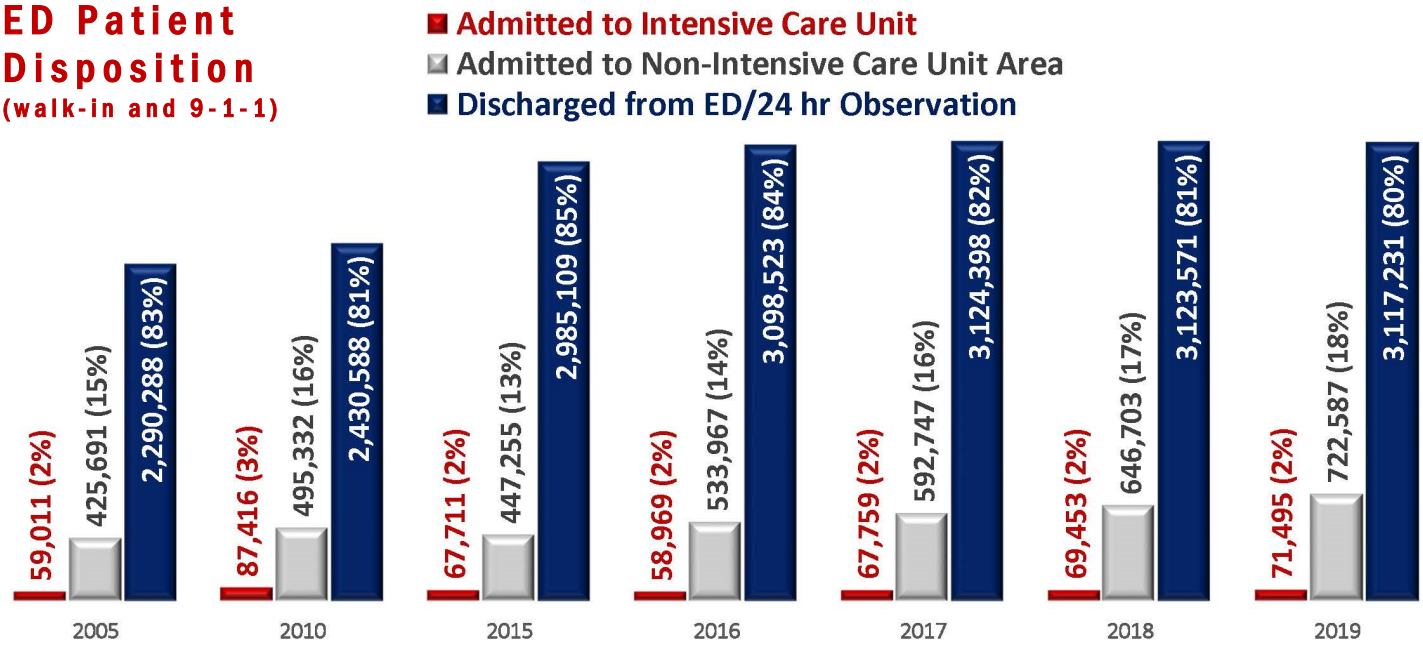


ED Patient Type
(walk-in and 9-1-1)

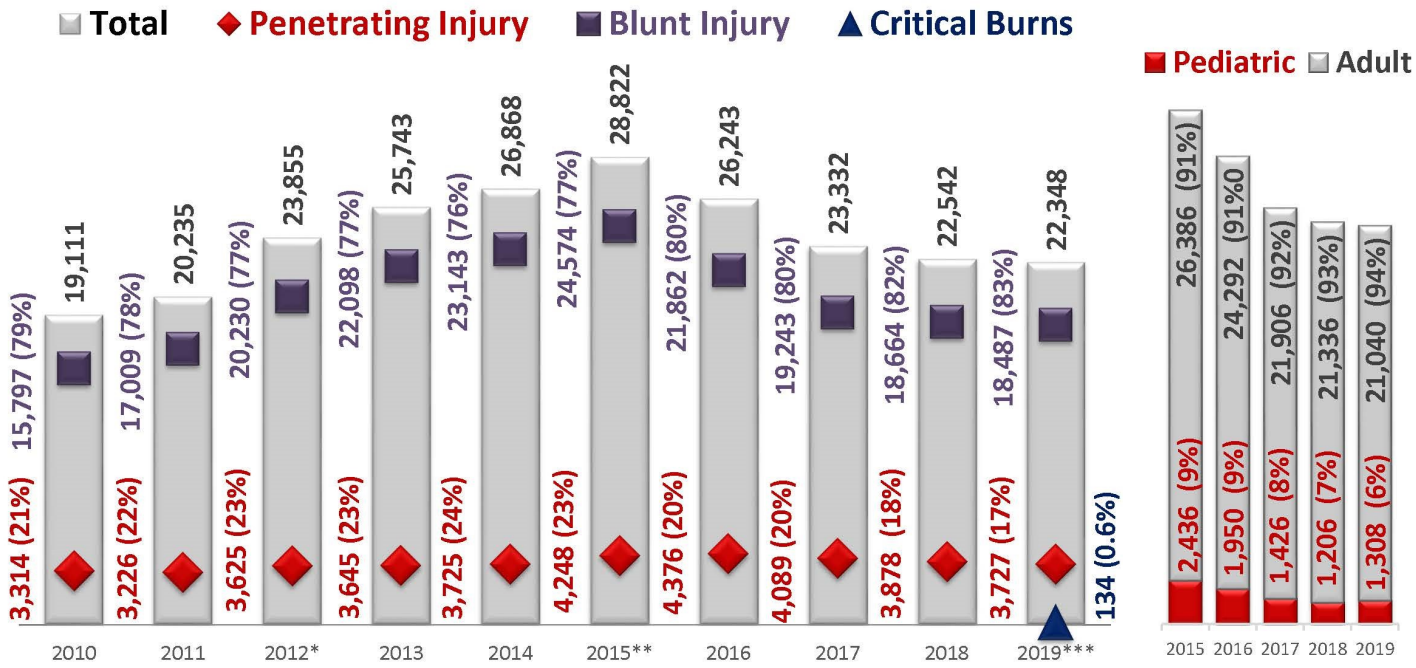


Critical—a patient presents an acute injury or illness that could result in permanent damage, injury or death (head injury, vehicular accident, shooting). Applicable Current Procedural Terminology (CPT) codes for this level of service would be 99284 (detailed history, detailed physical, and medical decision making of moderate complexity) or 99285 (medical decision making of high complexity) or 99291 (critical care, evaluation and management).
Urgent—a patient with an acute injury or illness, loss of life or limb is not an immediate threat to their well-being, or a patient who needs timely evaluation (fracture or laceration). Applicable CPT codes for this level of service would be 99282 (medical decision making of low complexity) or 99283 (medical decision making of moderate complexity).
Non-Urgent—a patient with a non-emergent injury, illness or condition; sometimes chronic; that can be treated in a non-emergency setting and not necessarily on the same day they are seen in the ED (pregnancy tests, toothache, minor cold, ingrown toenail). An applicable CPT code for this level of service would be 99281 (straight forward medical decision making).

ED Patient Disposition
(walk-in and 9-1-1)

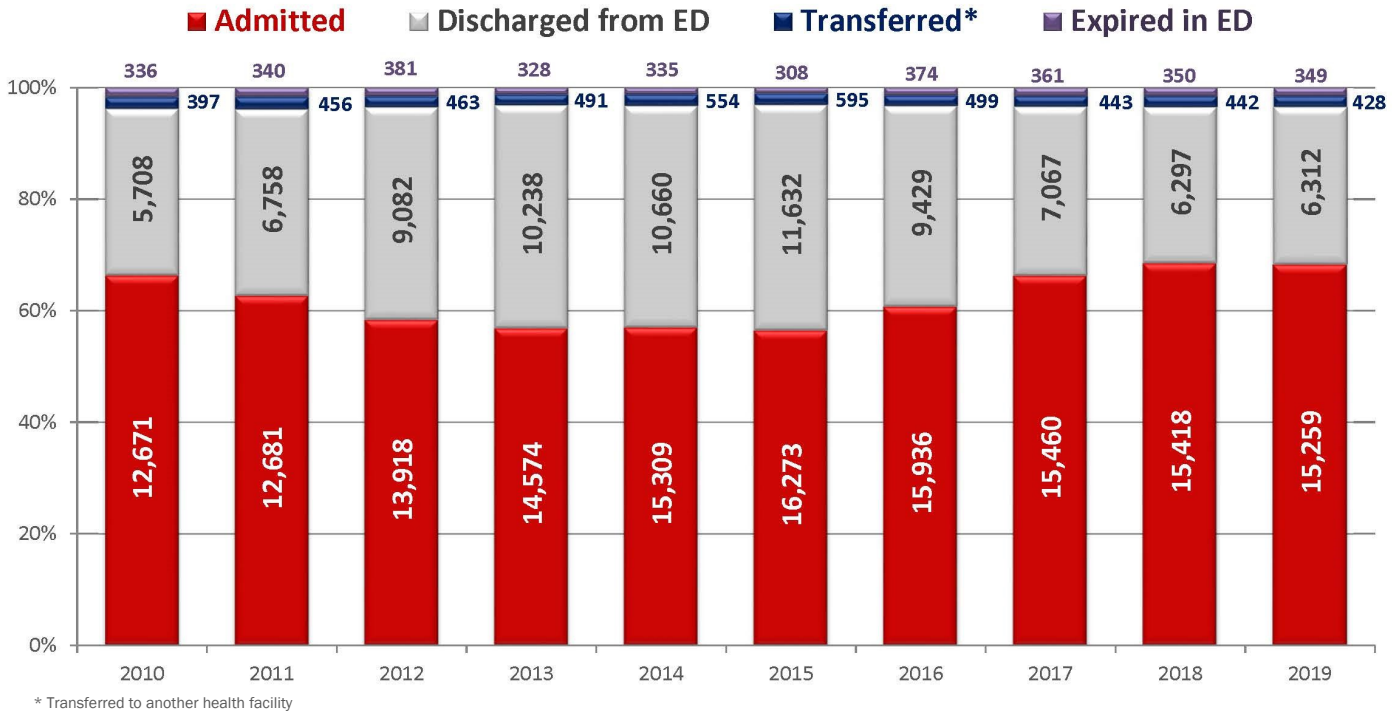


Trauma Center Volume



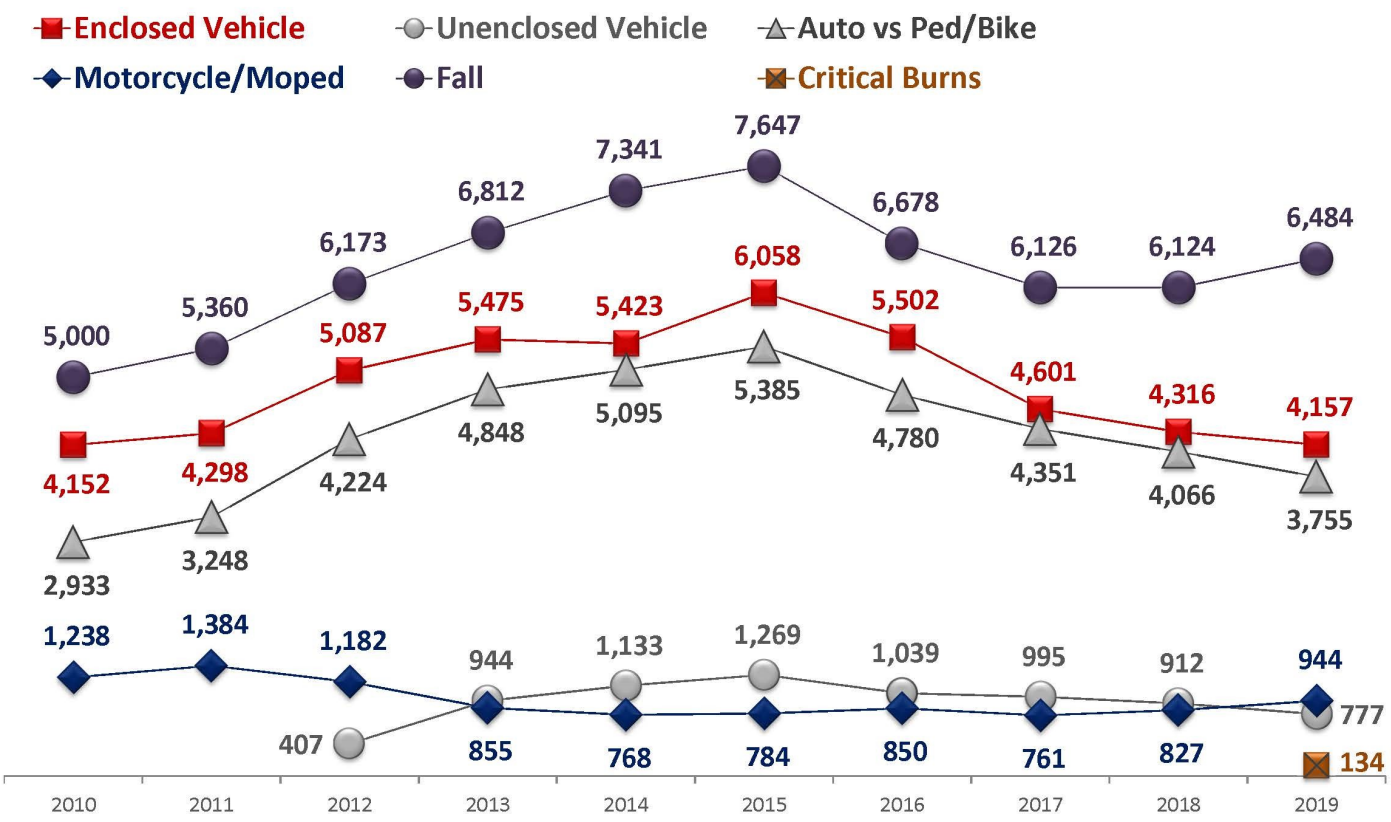
*2012: LA County adopted the Centers for Disease Control and Prevention Guidelines for Field Triage of Injured Patients
**2015 : Trauma Center Registry inclusion criteria was reduced.
***2019: Critical Burns added as a Trauma Center Criteria

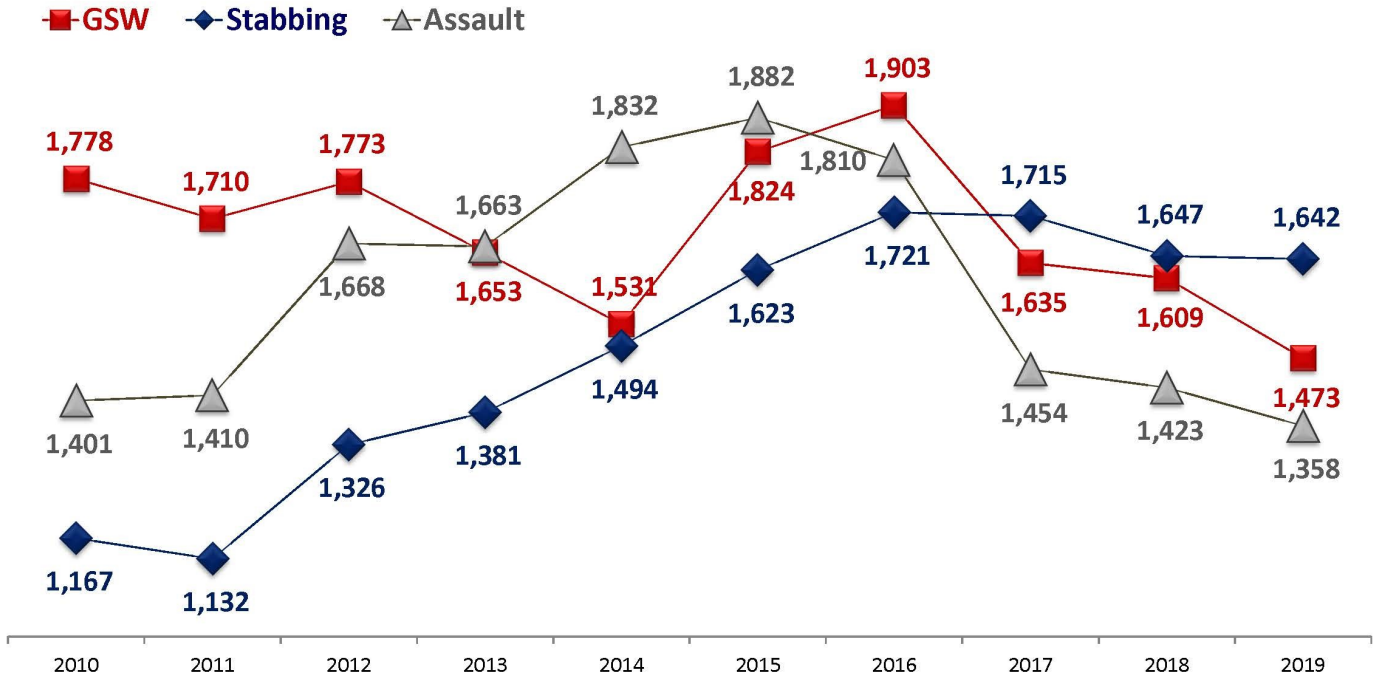
Patient Disposition of Trauma Center Patients



* Transferred to another health facility

Mechanism of Injury: Patients Transported to Trauma Centers

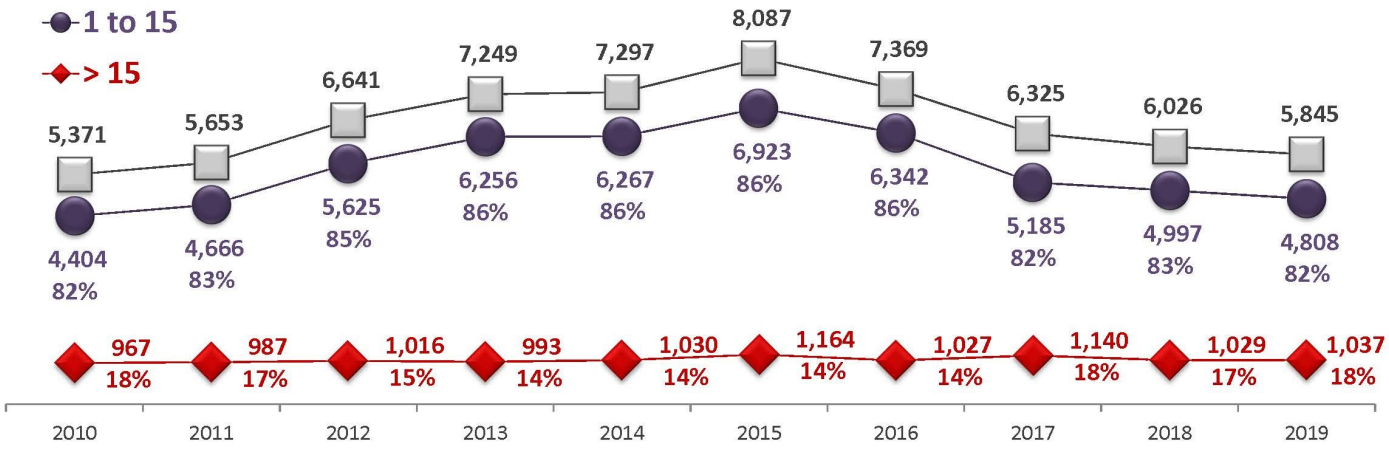




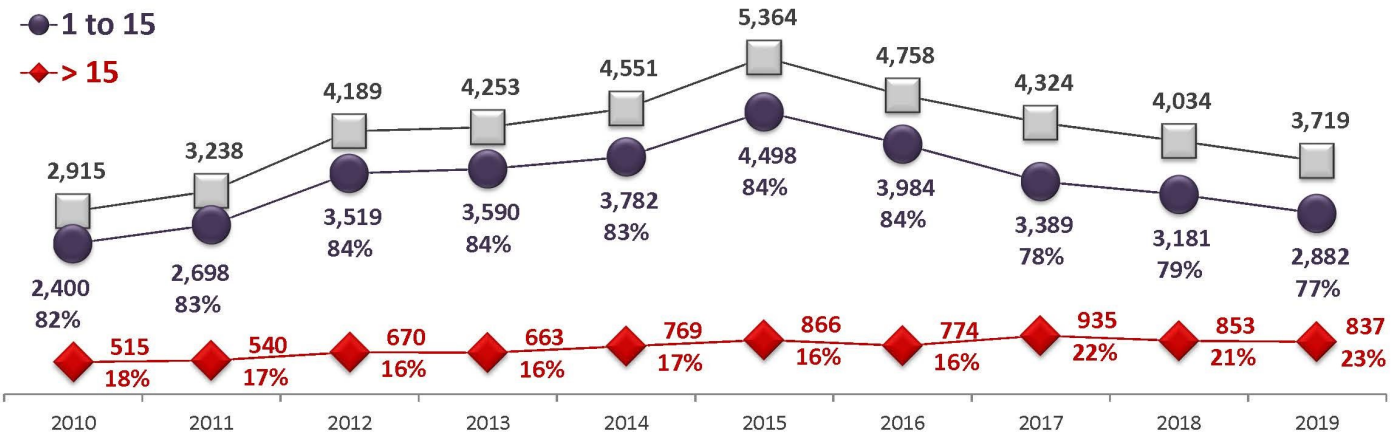
Injury Severity Score by Mechanism of Injury

Injury Severity Score (ISS): Is an established medical score to assess trauma severity. It correlates with mortality, morbidity and hospitalization time after trauma. It is used to define the term major trauma. A major trauma (or polytrauma) is defined as the ISS being greater than 15.

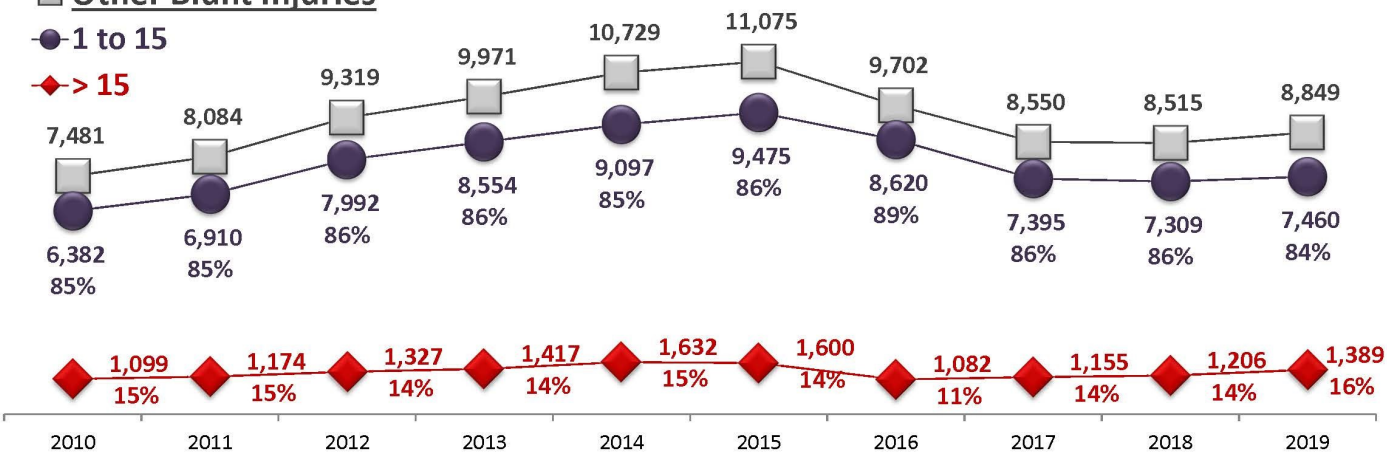
Motor Vehicle Accident



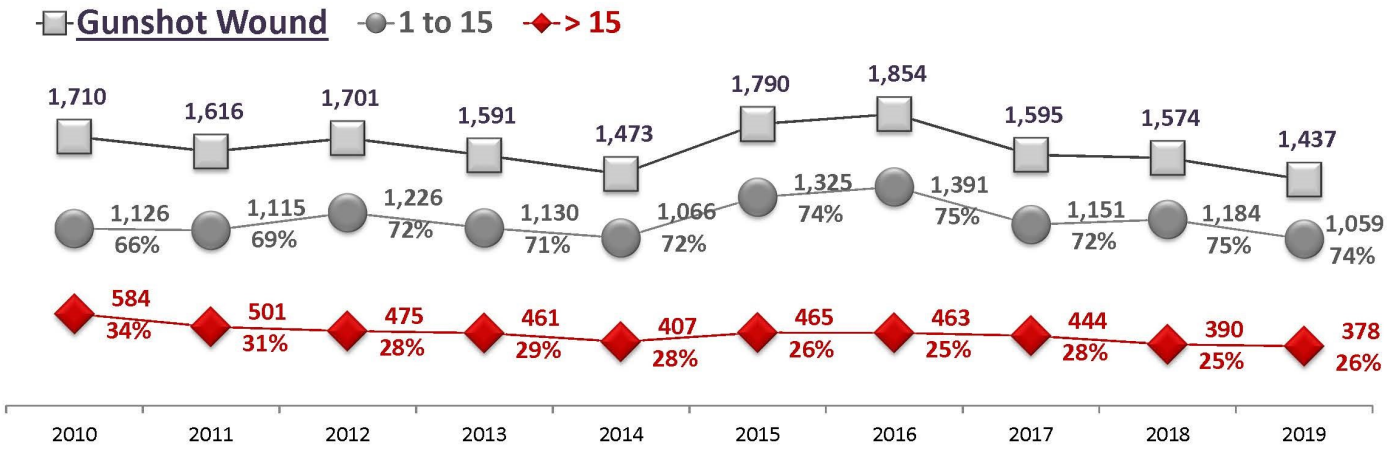
Automobile vs Pedestrian/Bicycle

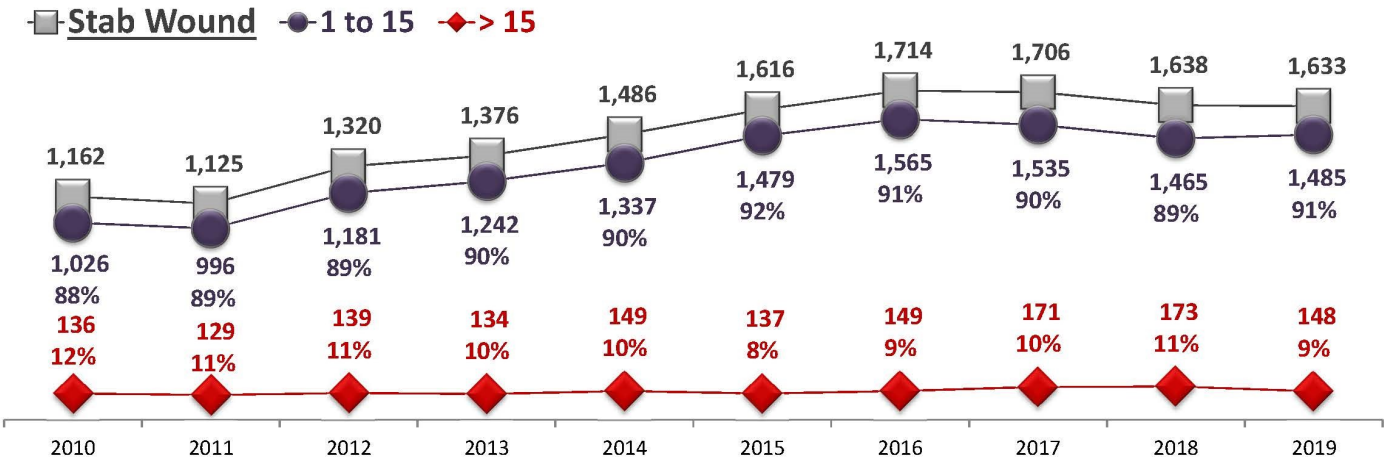


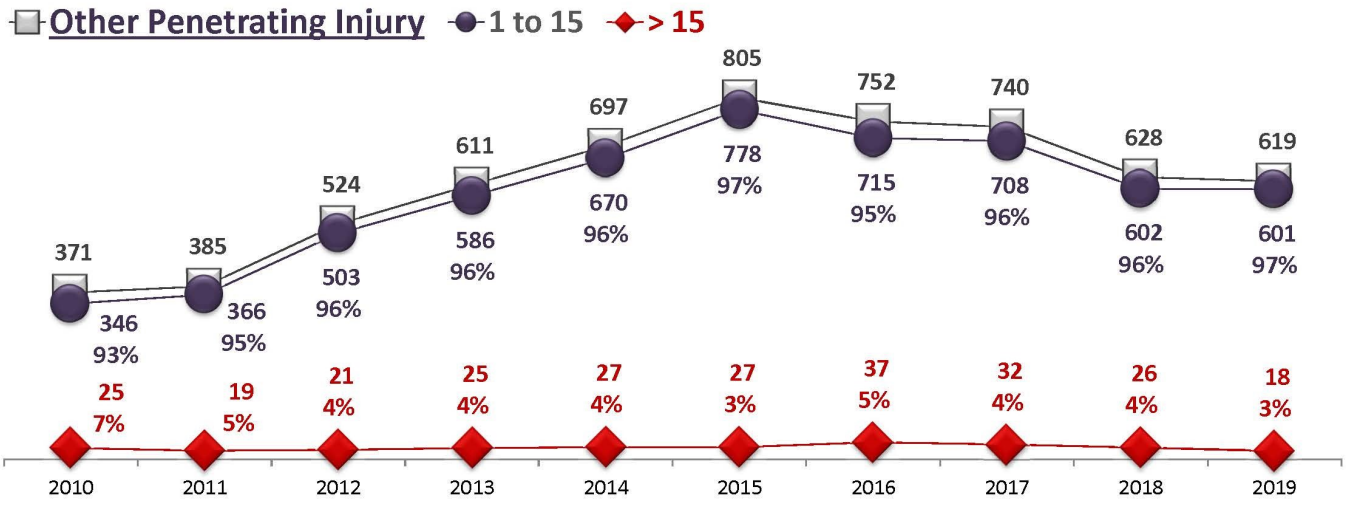
Other Blunt Injuries



Injury Severity Score by Mechanism of Injury



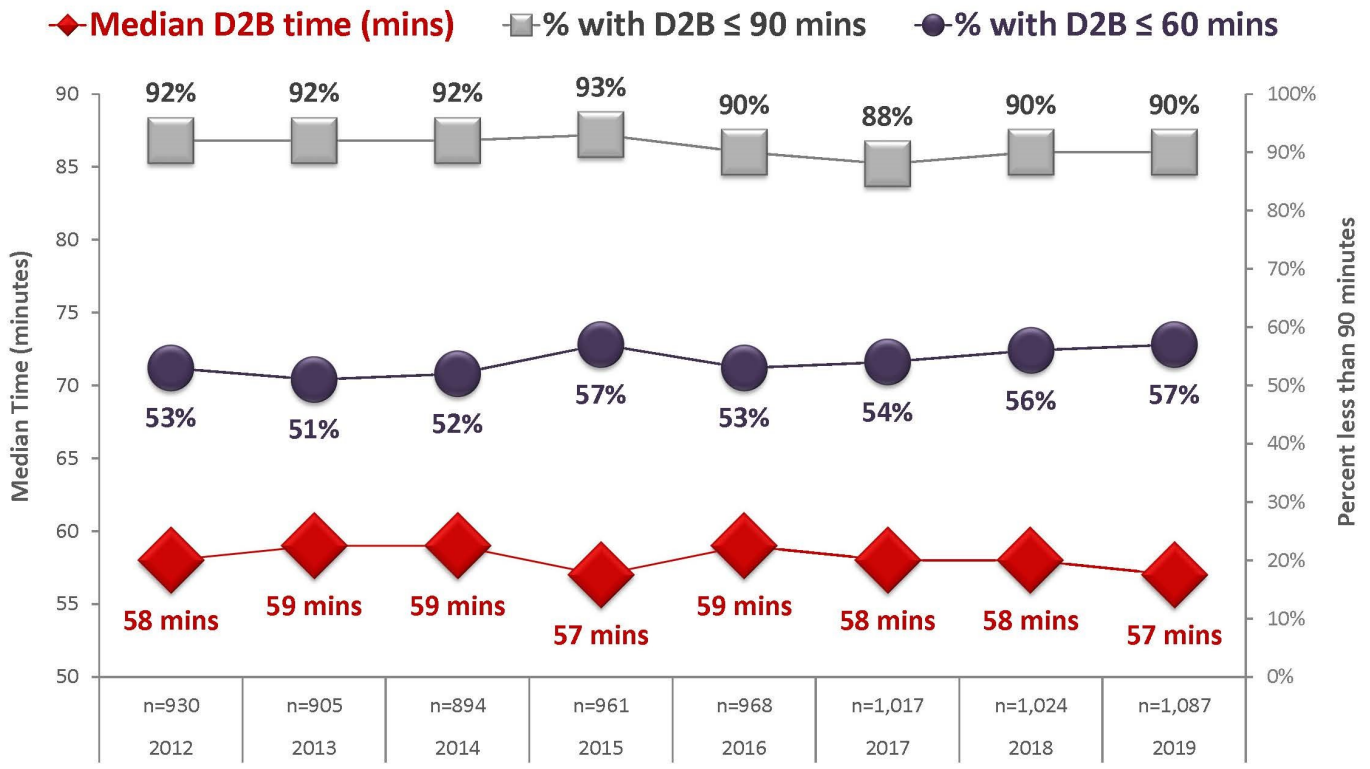




ST-Elevation Myocardial Infarction (STEMI)

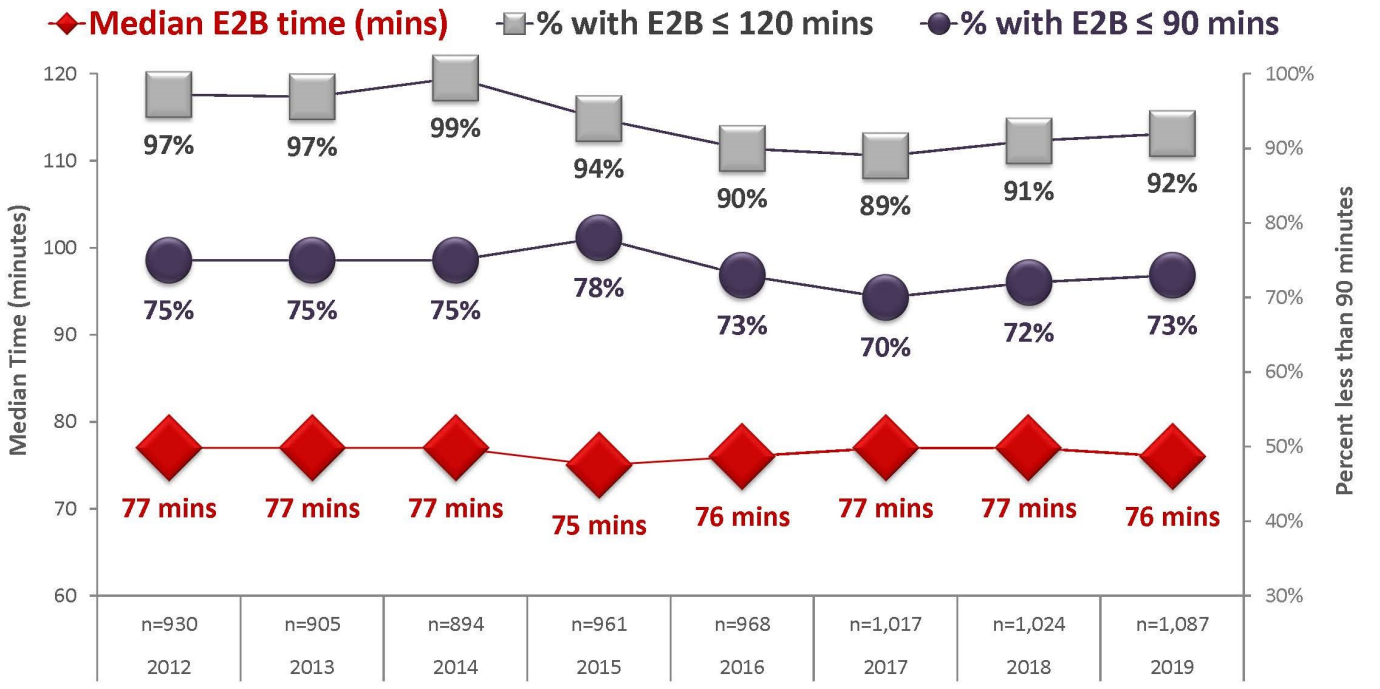
STEMI Receiving Center: Door-to-Device (D2B) Time

LA County Target: within 90 minutes 90% of the time and within 60 minutes 75% of the time



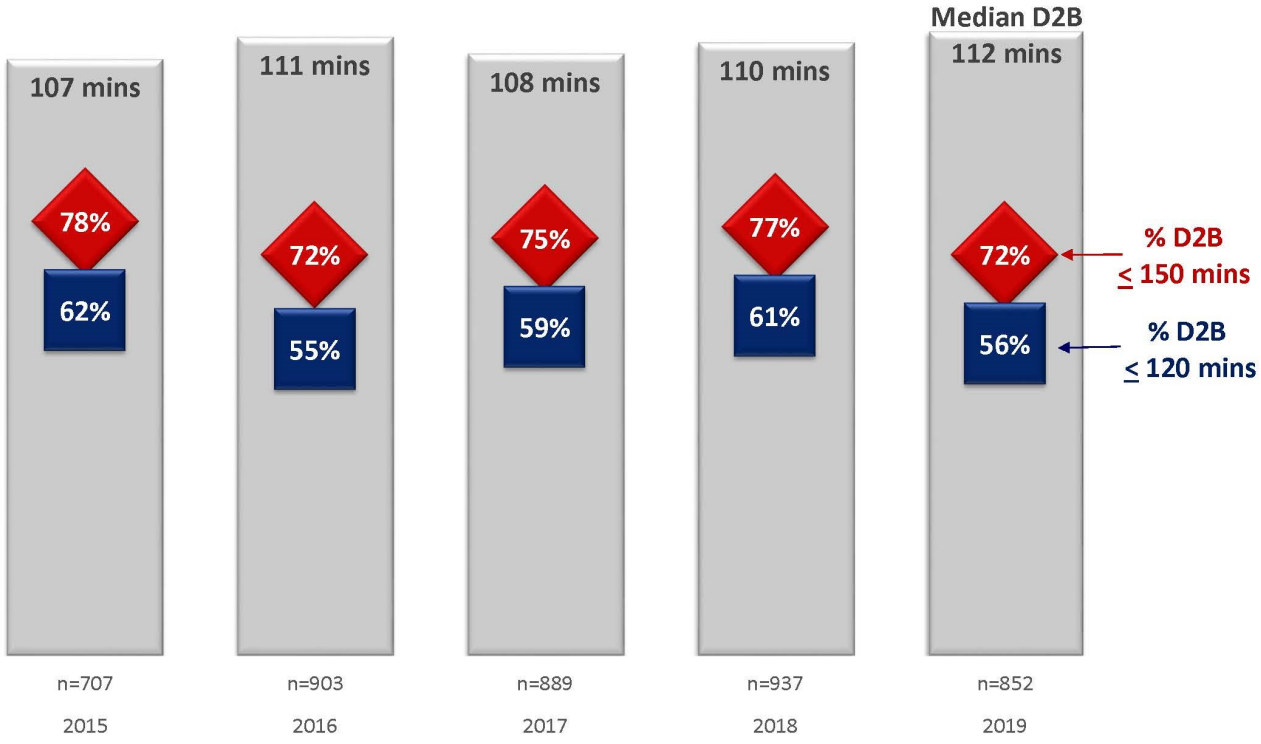
STEMI Receiving Center: EMS Medical Contact-to-Device (E2B) Time

LA County Target: within 120 minutes 90% of the time and within 90 minutes 75% of the time



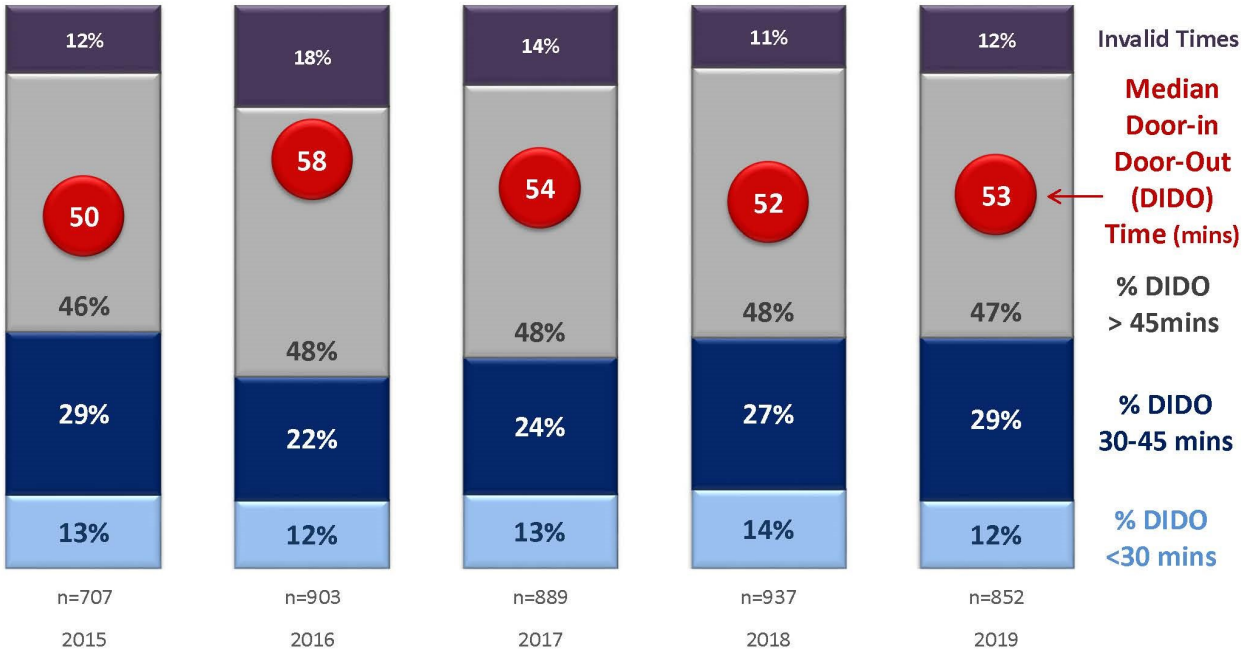
STEMI Referral Facility: Door-to-Device (D2B) Time

LA County Target: within 150 minutes 90% of the time and within 120 minutes 75% of the time

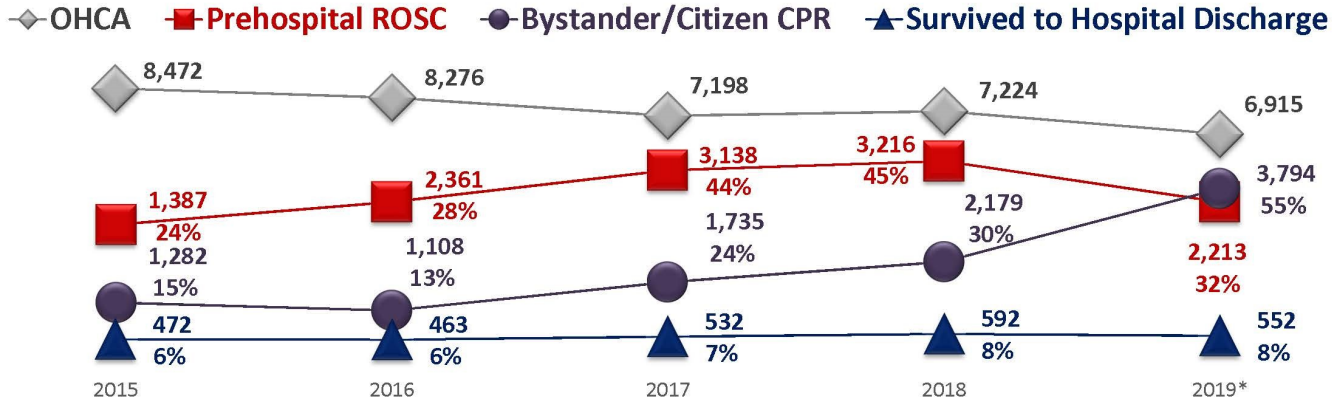


STEMI Referral Facility: Door-in Door-out (DIDO) Time

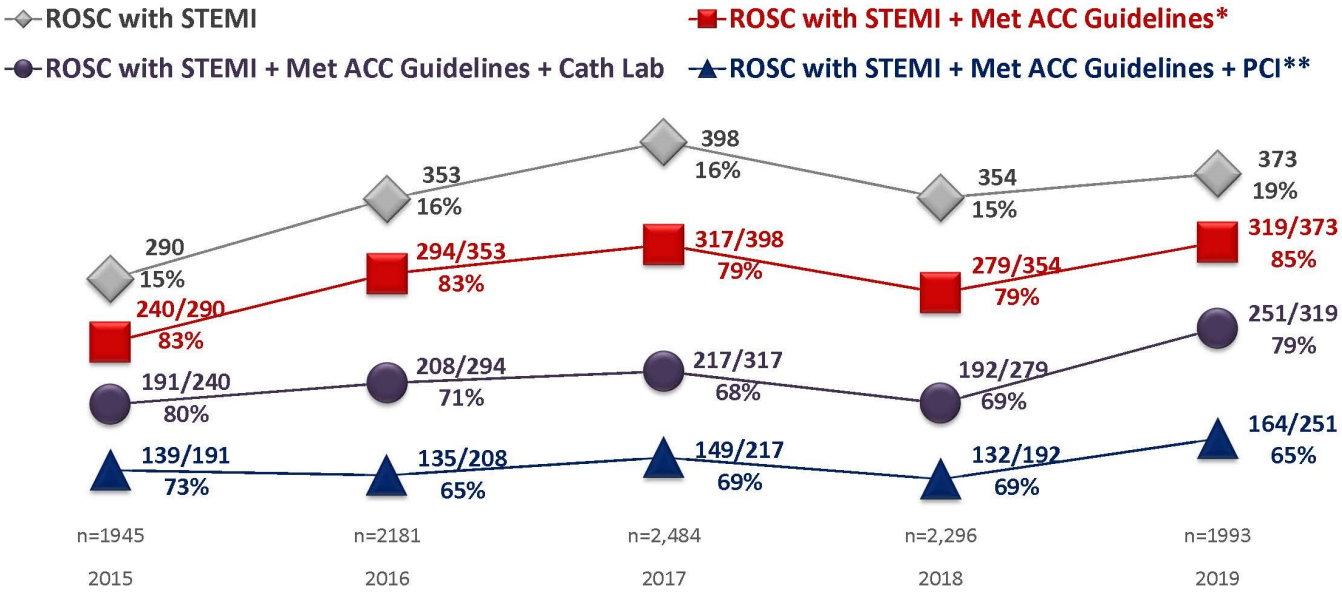
LA County Target: < 30 minutes



Out of Hospital Cardiac Arrest (OHCA)
Return of Spontaneous Circulation (ROSC)

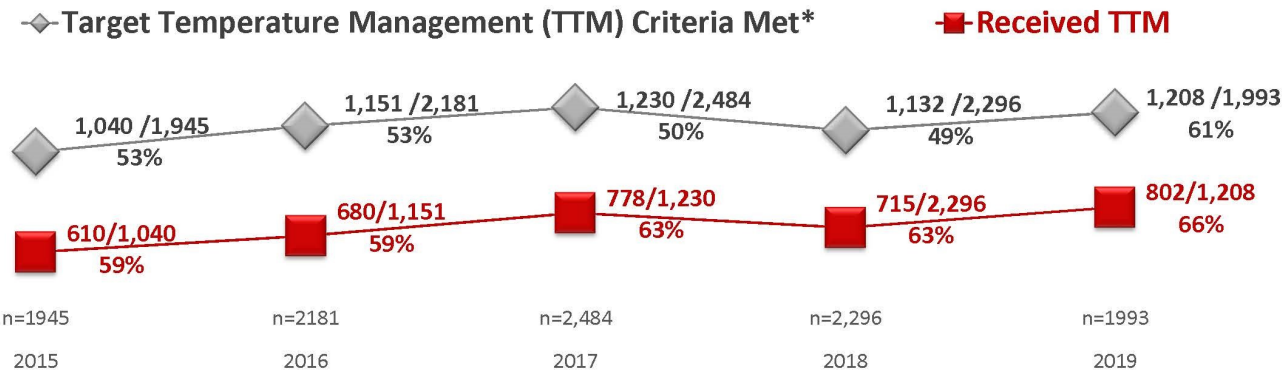


*2019 OHCA population is based on Provider Impression Cardiac Arrest Non-Traumatic, which was fully implemented April 1, 2019. DOAs were excluded. 2015-2018 OHCA population was based on Chief Complaint of Cardiac Arrest.



*ACC Guidelines for coronary angiography include: Age ≥18, pt did not expire, no DNR, no medical condition, treatment not refused and CL available.

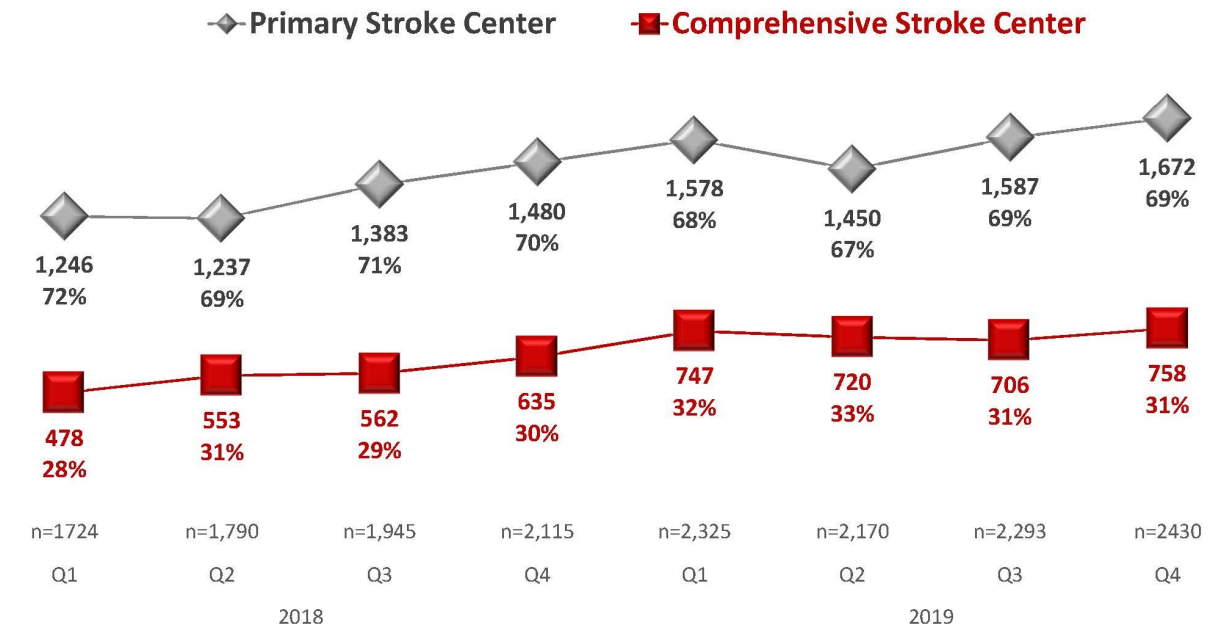
**PCI - Percutaneous Coronary Intervention is a procedure used to open or widen a narrowed or blocked coronary artery to restore blood flow supplying the heart.



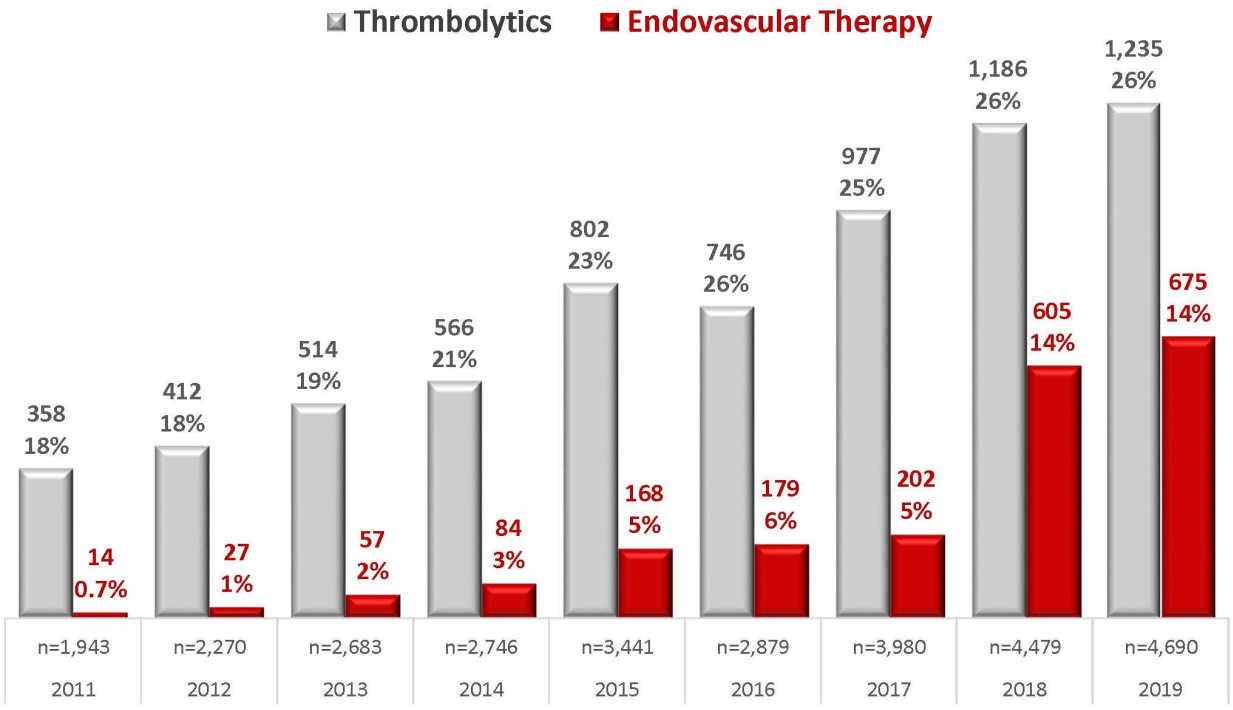
*TTM criteria excludes: died in ED, age <18, awake/responsive, end stage terminal illness, core temp <35 and pre-exiting DNR

Suspected Stroke Patient Destination

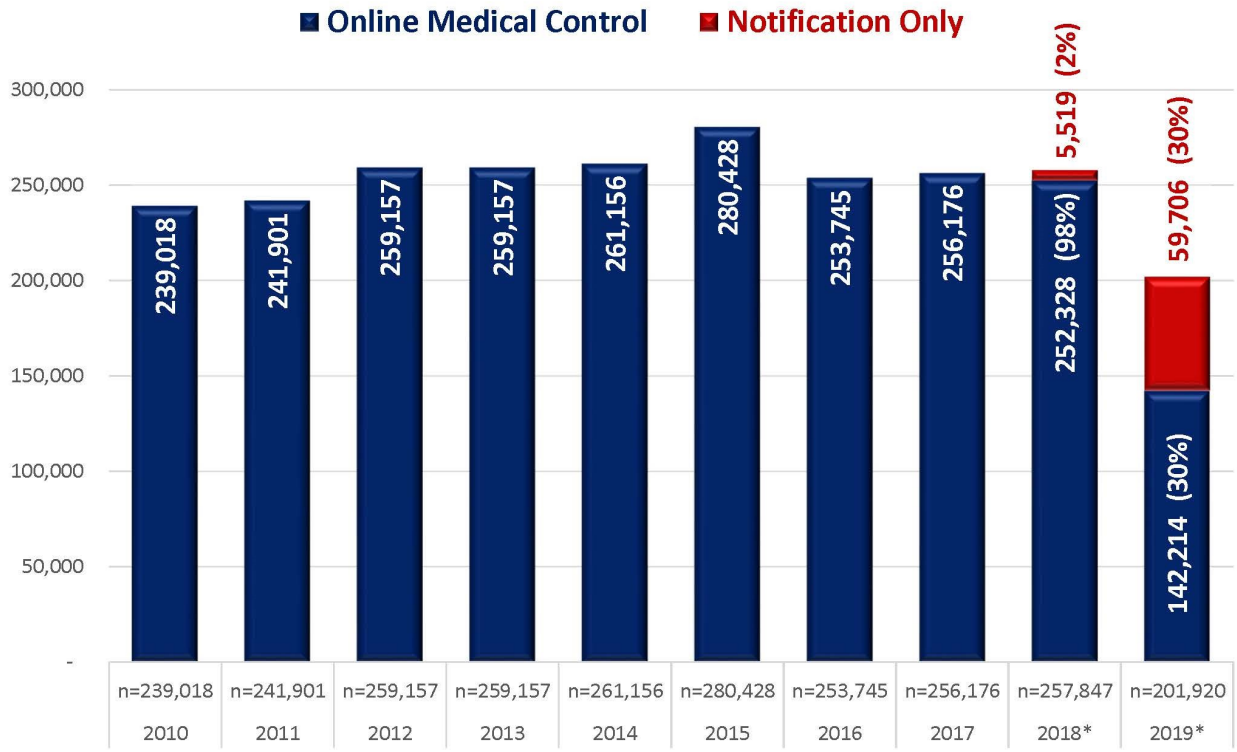
The routing of suspected stroke patients with large vessel occlusions based on a Los Angeles Motor Scale (LAMS) score of 4 or 5 to designated Comprehensive Stroke Centers began on January 8, 2018.



Treatment—All Ischemic Stroke



Paramedic Base Hospital Contact Volume



* Phased-in imlementation of New Treatment Protocols started in July 1, 2018 and was fully implemented in April 1, 2019. The New Treatment Protocols reduced the number of EMS responses requiring online medical control.

EMS AGENCY

To ensure timely, compassionate, and quality emergency and disaster medical services.

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Phone: 562-378-1500
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For data request please complete and submit Reference No. 622.1 at http://file.lacounty.gov/SDSInter/dhs/1006614_6222016-07-01.pdf

Journal of the American Heart Association

BRIEF COMMUNICATION

Emergency Medical Services Responses to Out-of-Hospital Cardiac Arrest and Suspected ST-Segment–Elevation Myocardial Infarction During the COVID-19 Pandemic in Los Angeles County

Jeffrey Eric Rollman, MPH, NRP*; Robert A. Kloner, MD, PhD*; Nichole Bosson, MD, MPH*; James T. Niemann, MD; Marianne Gausche-Hill, MD; Michelle Williams, RN, MICN; Christine Clare, RN; Weiyi Tan, MD, MPH; Xiaoyan Wang, PhD; David M. Shavelle, MD†; Asim M. Rafique, MD†

BACKGROUND: Public health emergencies may significantly impact emergency medical services responses to cardiovascular emergencies. We compared emergency medical services responses to out-of-hospital cardiac arrest (OHCA) and ST-segment–elevation myocardial infarction (STEMI) during the 2020 COVID-19 pandemic to 2018 to 2019 and evaluated the impact of California's March 19, 2020 stay-at-home order.

METHODS AND RESULTS: We conducted a population-based cross-sectional study using Los Angeles County emergency medical services registry data for adult patients with paramedic provider impression (PI) of OHCA or STEMI from February through May in 2018 to 2020. After March 19, 2020, weekly counts for PI-OHCA were higher (173 versus 135; incidence rate ratios, 1.28; 95% CI, 1.19–1.37; $P<0.001$) while PI-STEMI were lower (57 versus 65; incidence rate ratios, 0.87; 95% CI, 0.78–0.97; $P=0.02$) compared with 2018 and 2019. After adjusting for seasonal variation in PI-OHCA and decreased PI-STEMI, the increase in PI-OHCA observed after March 19, 2020 remained significant ($P=0.02$). The proportion of PI-OHCA who received defibrillation (16% versus 23%; risk difference [RD], −6.91%; 95% CI, −9.55% to −4.26%; $P<0.001$) and had return of spontaneous circulation (17% versus 29%; RD, −11.98%; 95% CI, −14.76% to −9.18%; $P<0.001$) were lower after March 19 in 2020 compared with 2018 and 2019. There was also a significant increase in dead on arrival emergency medical services responses in 2020 compared with 2018 and 2019, starting around the time of the stay-at-home order ($P<0.001$).

CONCLUSIONS: Paramedics in Los Angeles County, CA responded to increased PI-OHCA and decreased PI-STEMI following the stay-at-home order. The increased PI-OHCA was not fully explained by the reduction in PI-STEMI. Field defibrillation and return of spontaneous circulation were lower. It is critical that public health messaging stress that emergency care should not be delayed.

Key Words: cardiac arrest ■ COVID-19 ■ emergency medical services ■ myocardial infarction

See Editorial by Rea and Kudenchuk

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†D.M. Shavelle and A.M. Rafique are co-senior authors.

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For Sources of Funding and Disclosures, see page 7.

JAHA is available at: www.ahajournals.org/journal/jaha

On March 4, 2020, California declared a state of emergency, followed by a stay-at-home order on March 19, 2020 to reduce spread of SARS-CoV-2. Nationwide, emergency departments experienced a rapid decline in visits starting in March, with the exception of increased cardiac/respiratory arrest and infectious disease cases.[1,2] Along with the reduction in emergency departments volume, significant decreases in percutaneous coronary intervention activations for ST-segment–elevation myocardial infarctions (STEMI) throughout the United States began in early March.[3,4] This drop was seen despite widely-disseminated guidelines that continued to recommend primary percutaneous coronary intervention as the default option in all patients with STEMI.[5] California healthcare systems noted reductions in pre-hospital transports and emergency departments visits, including acute myocardial infarctions, suggesting that the stay-at-home order may have impacted decisions by the public to activate 9-1-1 for time-sensitive emergencies.[6,7] Reports from Italy, France, and New York, NY suggested that out-of-hospital cardiac arrest (OHCA) increased but STEMI decreased during the COVID-19 pandemic.[8–10] Our objective was to assess changes in emergency medical services (EMS) responses for OHCA and STEMI in Los Angeles County (LAC), before and after the stay-at-home order, with comparison with historic values.

METHODS

This was a retrospective study using registry data from LAC-EMS. The study was approved with waiver of informed consent by Medical Institutional Review Board, University of California, Los Angeles. The data that support the findings of this study are available from the corresponding author on request and approval by LAC-EMS Agency.

Study Setting and Population

LAC-EMS serves a diverse population of 10.1 million across 4058 square miles with 29 provider agencies, >4200 paramedics, 70 LAC 911-receiving hospitals and 19 500 licensed beds. LAC-EMS Agency collects data on all field encounters and since April 2020 has conducted a daily census of COVID-19 cases, availability of intensive care unit, and non-intensive care unit beds, and mechanical ventilators. For each encounter, paramedics document up to 2 provider impressions (PI) from a list of 67 potential PIs. A PI of OHCA (PI-OHCA) is defined as non-traumatic cardiac arrest with attempted resuscitation. A PI of obvious death is defined as non-traumatic cardiac arrest found dead on arrival such that no resuscitation is initiated. A PI of STEMI (PI-STEMI) is based on software interpretation of the ECG with further verification by paramedics in context of the patient's clinical presentation and, when necessary, online medical direction. The documented PI is not a definitive diagnosis, however, each is specifically defined and determined by objective assessment findings in accordance with the LAC treatment protocols. There were no pertinent changes to the PIs and related treatment protocols during the study period. We abstracted volume data for adult patients with PI-OHCA, PI-dead on arrival, and/or PI-STEMI for a period of 17 weeks from February 1 to May 29, 2020 and corresponding weeks from 2018 to 2019; and patient-level data available for 28 of the 29 EMS Provider Agencies, for EMS response times, field defibrillation, return of spontaneous circulation (ROSC), and transports for PI-OHCA. Unlike most other studies that compared 2020 data to 2019 alone, we chose to compare 2020 data to the 2018 and 2019 averages because of potential year-to-year variability.

Outcomes Measures and Statistical Analysis

Using Poisson regression we compared weekly counts of PI-OHCA and PI-STEMI from 2020 to average weekly counts from 2018 to 2019 before and after the March 19, 2020 stay-at-home order. Goodness-of-fit tests were performed to assess the adequacy of the Poisson regression model. The models adjusted for before/after the March 19 inflection point, year, interaction of inflection point and year. Model-based estimates of weekly counts, incidence rate ratios (IRR), 95% CI, and *P* values were determined. Goodness-of-fit tests were evaluated. We compared weekly counts for PI-OHCA before and after March 19, 2020 after adjusting for seasonal variation in PI-OHCA with average counts from 2018 to 2019 and accounting for the decline in PI-STEMI counts. We determined the cumulative change in the incidence of PI-OHCA and PI-STEMI by subtracting 2018 and 2019 averaged daily cases from corresponding daily 2020 cases. These cumulative excess counts were calculated for the March 19 through May 29 period to examine the absolute volume changes following the stay-at-home order. We defined response times as the interval between dispatch and scene arrival of the first EMS unit, defibrillation as at least 1 shock during the EMS encounter, and field ROSC as any occurrence of ROSC documented during the EMS encounter. We evaluated response times with 1-way ANOVA and compared proportions of field defibrillation, ROSC, and transport with risk difference with Chi-square test. Analyses were performed with SAS 9.4 and R 4.0.0.[11,12]

RESULTS

There were 2890 PI-OHCA cases from February 1 to May 29, 2020, compared with an average of 2393 PI-OHCA cases during the same 2018 to 2019 time period. Weekly counts for PI-OHCA were 170 during 2020

compared with 141 during 2018 to 2019 (IRR 1.22; 95% CI, 1.16–1.29; *P*<0.001). For PI-STEMI there were 1087 cases during 2020 compared with an average 1167 cases during 2018 to 2019, with weekly counts of 64 versus 69, respectively (IRR, 0.94; 95% CI, 0.86–1.01; *P*=0.10). The goodness-of-fit tests (ratio of scaled deviance to degrees of freedom and Pearson Chi-Square to degrees of freedom) verified that the Poisson regression model fit the data and was appropriate for the analyses.

After March 19, weekly counts for PI-OHCA in 2020 were significantly higher than the corresponding average weekly counts from 2018 to 2019 (173 versus 135; IRR, 1.28; 95% CI, 1.19–1.37; *P*<0.001) (Figure 1A). Weekly counts for PI-STEMI in 2020 after March 19 were significantly lower compared with the corresponding average weekly counts from 2018 to 2019 (57 versus 65; IRR, 0.87; 95% CI, 0.78–0.97; *P*=0.02) (Figure 1B). Before March 19, weekly counts for PI-OHCA were higher in 2020 than in 2018 to 2019 (166 versus 148; IRR, 1.12; 95% CI, 1.03–1.22; *P*=0.01), but there was no difference in PI-STEMI before March 19 (74 versus 73; IRR, 1.01; 95% CI, 0.89–1.14; *P*=0.88).

Significant increase in weekly PI-OHCA counts (*P*=0.02) and a trend to a decrease in weekly PI-STEMI counts (*P*=0.08) was observed during 2020 after March 19, 2020 when compared with before, after adjusting for seasonal variation in corresponding counts from the same time periods in 2018 to 2019 (Figure 2A and 2B). After adjusting for the decrease in PI-STEMI and seasonal variation in PI-OHCA counts, the aforementioned increase in weekly PI-OHCA counts after March 19, 2020 remained significant (*P*=0.02).

There was a cumulative excess of 465 PI-OHCA cases (37%) and decrease of 55 PI-STEMI cases (8%) from March 19 to May 29, 2020 compared with same period in 2018 and 2019 period. (Figure 3) There was also an increase in patients with PI-dead on arrival in 2020 compared with 2018 and 2019, starting around the time of the stay-at-home order (Figure S1).

EMS response times were longer after March 19, 2020 compared with 2018 to 2019 for PI-OHCA (5.13 ± 0.17 versus 4.71 ± 0.40 minutes; difference 0.42; 95% CI, 0.19–0.64; *P*=0.001) and PI-STEMI (5.08 ± 0.55 versus 4.67 ± 0.44 minutes; difference

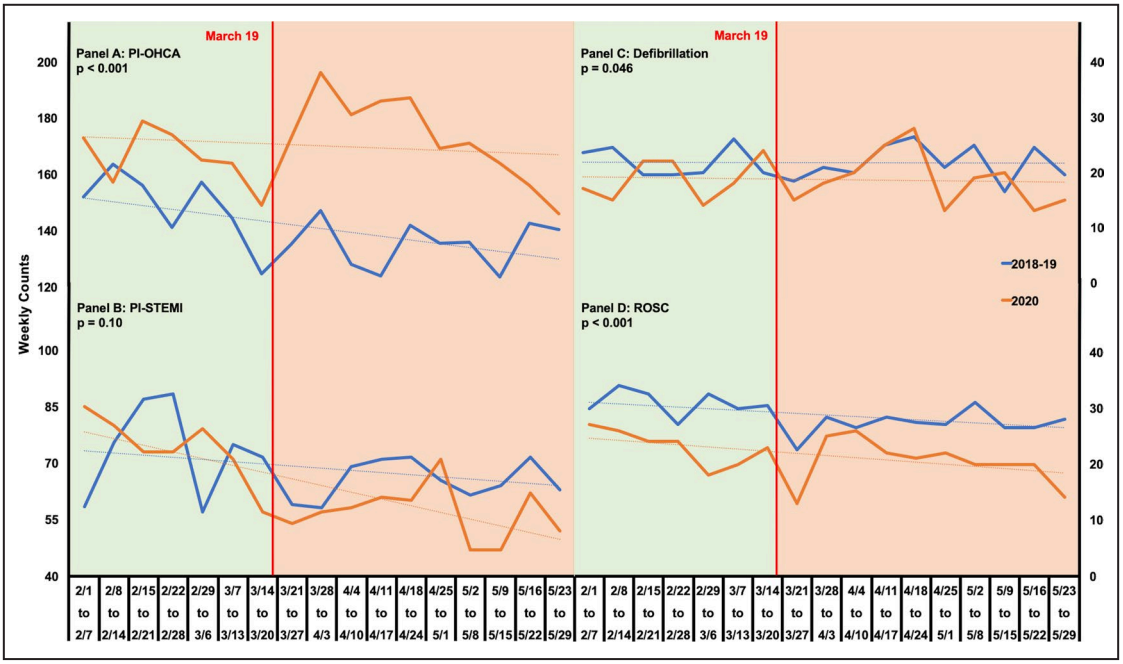

Figure 1. Weekly counts of EMS responses with provider impression of out-of-hospital cardiac arrests (PI-OHCA) and ST-segment–elevation myocardial infarction (PI-STEMI) from February 1 to May 29, 2020. Field defibrillation and return of spontaneous circulation (ROSC) data were available for 28 of the 29 EMS agencies which represent approximately two thirds of all responses. **A**, Weekly counts of PI-OHCA were significantly higher during 2020 compared with corresponding average weekly counts from 2018 to 2019 (*P*<0.001). **B**, Weekly counts of PI-STEMI were not significantly different during 2020 compared with corresponding average weekly counts from 2018 to 2019 (*P*=0.1). **C**, Weekly counts of field defibrillation showed trend towards a significant reduction during 2020 compared with corresponding average weekly counts from 2018 to 2019 (*P*=0.067). **D**, Weekly counts of field return of spontaneous circulation (ROSC) were significantly lower during 2020 compared with corresponding average weekly counts from 2018 to 2019 (*P*<0.001). PI-OHCA, provider impression of out-of-hospital cardiac arrests; PI-STEMI, provider impression-ST-segment–elevation myocardial infarction; and ROSC, return of spontaneous circulation.

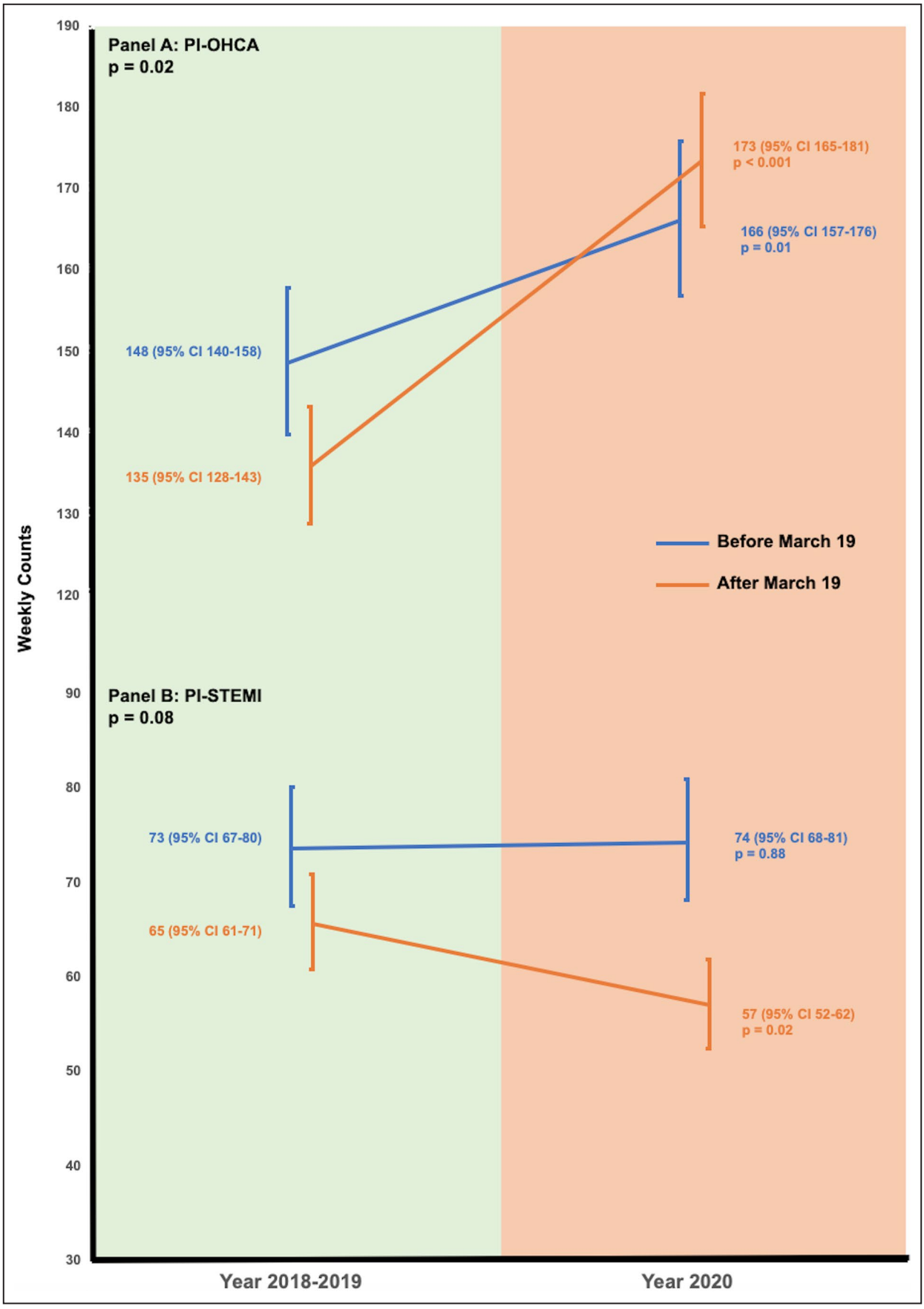

Figure 2. The average weekly counts for emergency medical services responses with provider impression of out-of-hospital cardiac arrests (PI-OHCA) and ST-segment–elevation myocardial infarction (PI-STEMI) before and after March 19 in 2020 compared with 2018 and 2019.

A, The increase in weekly counts of PI-OHCA in 2020 after March 19 was statistically significant compared with counts before March 19, after adjusting for the seasonal variation noted in 2018–2019 (P=0.02). **B**, The decrease in weekly counts of PI-STEMI in 2020 after March 19 trended towards a significant change compared with counts before March 19, after adjusting for the seasonal variation noted in 2018–2019 (P=0.08). PI-OHCA, provider impression of out-of-hospital cardiac arrests; and PI-STEMI, provider impression-ST-segment–elevation myocardial infarction.

0.41; 95% CI, 0.09–0.73; P=0.015). The proportion of PI-OHCA who received defibrillation (16% versus 23%; risk difference, –6.91%; 95% CI, –9.55% to –4.26%; P<0.001), had ROSC (17% versus 29%; risk difference, –11.98%; 95% CI, –14.76% to –9.18%; P<0.001) and were transported (26% versus 47%; risk difference, –20.99%; 95% CI, –24.12% to –17.76%; P<0.001) were all lower after March 19, 2020 compared with 2018 and 2019 (Table S1). The decrease in weekly counts of defibrillation and ROSC was noted during 2020 both before and after March 19 compared with 2018 and 2019 (Figure 1C and 1D). A detailed comparison of EMS response times and proportion of patients getting field defibrillation, ROSC, and those transported is provided in Table S1 and Figure S2.

Throughout the COVID-19 pandemic, LAC maintained daily availability of staffed intensive care unit (228 ± 36) and non-intensive care unit (1043 ± 210) beds as well as mechanical ventilators (1145 ± 110) (Figure S3).

Though 2018 and 2019 PI-OHCA weekly counts were similar, 2018 PI-STEMI weekly counts were lower than 2019 PI-STEMI weekly counts (Figure S4).

DISCUSSION

In LAC we found a 37% increase in EMS responses for OHCA and 8% decrease in EMS responses for STEMI from the March 19, 2020 stay-at-home order through May 2020 compared with 2018 and 2019. After adjusting for seasonal variation in PI-OHCA and decline in PI-STEMI, the observed increase in PI-OHCA remained significant following the stay-at-home order. We found slightly longer EMS response times, and a significant decline in the proportion of PI-OHCA with field defibrillation, ROSC, and transport to the hospital after March 19, 2020 compared with 2018 to 2019.

An alternative explanation for the increase in PI-OHCA could be that paramedics were more likely to

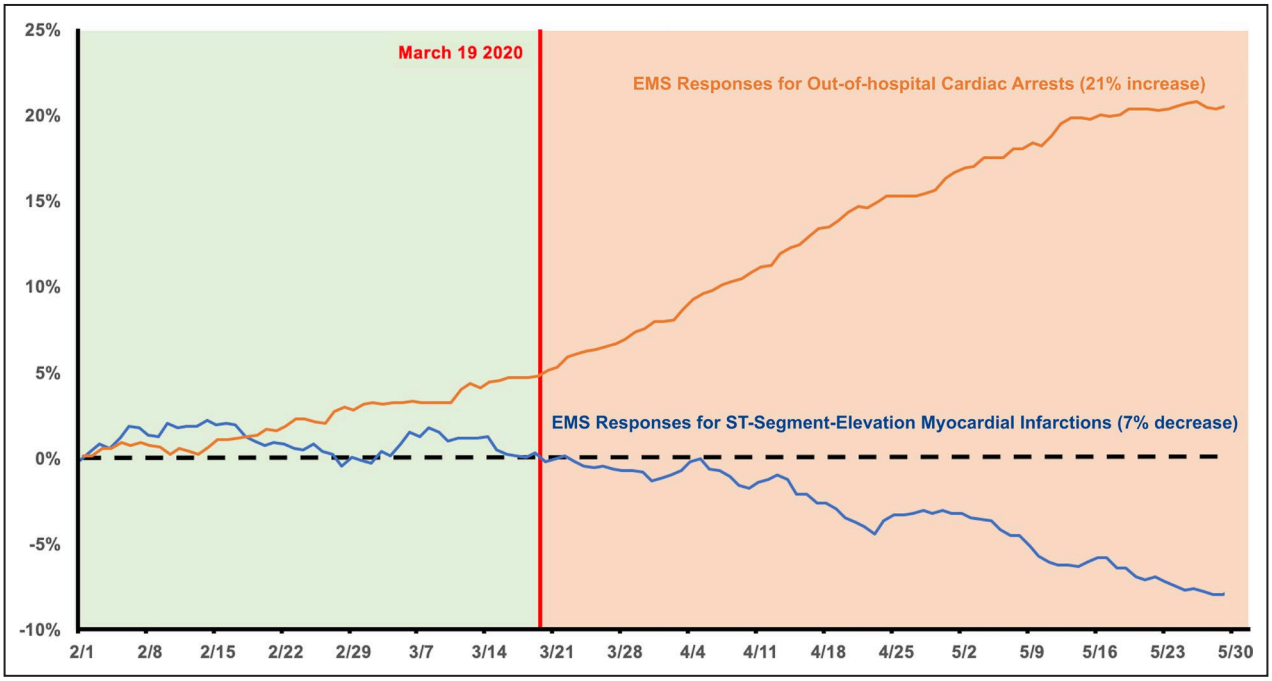

Figure 3. Percentage cumulative change in the daily counts for emergency medical services responses with provider impression of out-of-hospital cardiac arrests (PI-OHCA) and ST-segment–elevation myocardial infarction (PI-STEMI) in 2020 compared with 2018 and 2019 plotted over time.

From March 19 to May 29, 2020 there was a cumulative excess of 465 PI-OHCA cases (37%) and a cumulative decrease of 55 (PI-STEMI) cases (8%). EMS indicates emergency medical services.

resuscitate patients and were less likely to determine a patient as dead on arrival. However, we found an increase in patients with PI-dead on arrival in 2020 compared with 2018 and 2019, starting around the time of the stay-at-home order (Figure S1). Therefore, the increase in PI-OHCA cannot be explained by changes in resuscitation patterns and, in fact, underestimates the increase in OHCA. This finding is consistent with other studies that also established an increase in field patients dead on arrival[13,14] and suggests that paramedics may have attempted resuscitation less often during the height of the pandemic.

The increase of 37% in PI-OHCA cases in LAC is substantial, but considerably less than the observed 199% increase in OHCA New York, NY, and the 52% increase in Lombardy, Italy.[10,15] A recent study found that only 45% of excess California deaths in March and April, 2020 could be directly attributed to COVID-19. However, official COVID-19 death tallies underestimate full impact of COVID-19-related mortality.[16,17] Previous work found >30% higher death rates during winter months compared with summer months, suggesting that OHCAs would be expected to decline as the year progresses rather than plateau as occurred in 2020.[18,19] Thus, the increase in PI-OHCA during 2020 is out of proportion and noted before reduction in PI-STEMI occurred; this in conjunction with a lower proportion of field defibrillation may be associated with prevalent but undiagnosed COVID-19. Early descriptive studies in the Seattle metropolitan area and Australia's Victoria state identified low prevalence of COVID-19 (0%–10%) among patients with OHCA, but these studies also did not find any increase in OHCA responses during their study periods.[13,14] Throughout our study period, LAC had ample availability of beds and mechanical ventilators, possibly because of early implementation of the stay-at-home order and a less dense population compared with New York, NY and Italy, where a sudden surge in COVID-19 incidence overwhelmed local health systems.

Our investigation adds to prior publications and demonstrates that, in a different geographic area impacted by COVID-19, OHCA increased while field ROSC and STEMI responses decreased. Our findings of decreased PI-STEMI beginning after the March 19 stay-at-home order also align with hospital data showing declines in cardiac catheterization STEMI activations beginning in early March.[3,4]. Furthermore, the 2018 to 2019 variability in PI-STEMI likely diluted the potential stay-at-home order effect and led to a smaller decrease in PI-STEMI than would have been found had 2020 been compared with 2019 alone. To our knowledge, this study is the first to evaluate simultaneous trends in EMS responses for both OHCA and STEMI and to show that the increase in OHCA was not fully explained by the reduction in responses for STEMI or lack of healthcare availability.

Limitations

Given retrospective analysis we cannot determine causality. The data set excludes OHCAs and STEMIs not treated by EMS. Diagnosis of PI-STEMI was based upon field ECG interpretation, and does not represent those subsequently undergoing coronary angiography or percutaneous coronary intervention. Patient-level data to determine response times, field defibrillation and ROSC, and transport were not available in 2020 for one of the 29 EMS Agencies, representing approximately one third of EMS responses. Comparing prior years response times and demographics for this agency yielded similar results to the overall system. We could not determine initial rhythm in database but only if patient was defibrillated in field. Finally, we cannot ascertain which cases of OHCA directly resulted from COVID-19 infection.

CONCLUSIONS

Paramedics in LAC responded to a significant increased number of PI-OHCA and a decreased number of PI-STEMI following the stay-at-home order issued in response to COVID-19. The increase in OHCA was not fully explained by the reduction in responses for STEMI. Field defibrillation and ROSC were significantly lower following the stay-at-home order. Our findings indicate that public health messaging, such as stay-at-home orders, may be associated with adverse changes in out-of-hospital cardiovascular emergency volumes. It is critical that public health messaging stress that care should not be delayed for emergency medical conditions.

ARTICLE INFORMATION

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Author Contributions: All authors contributed to the study design with data available for full access. The article was drafted by Rollman, Rafique, and Tan with further contributions by other authors. Critical review and edits to the article were done by Kloner, Bosson, Niemann, Gausche-Hill, and Shavelle. Data and project coordination were completed by Williams and Clare. Statistical analysis was done by Wang. Proposal and Institutional Review Board submission was completed by Tan.

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Disclosures

No disclosures or conflict of interest for authors.

Supplementary Material

Table S1
Figures S1–S4

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SUPPLEMENTAL MATERIAL

Table S1. Comparison of EMS response times and proportion of patients getting field defibrillation, return of spontaneous circulation and those transported to the hospital.

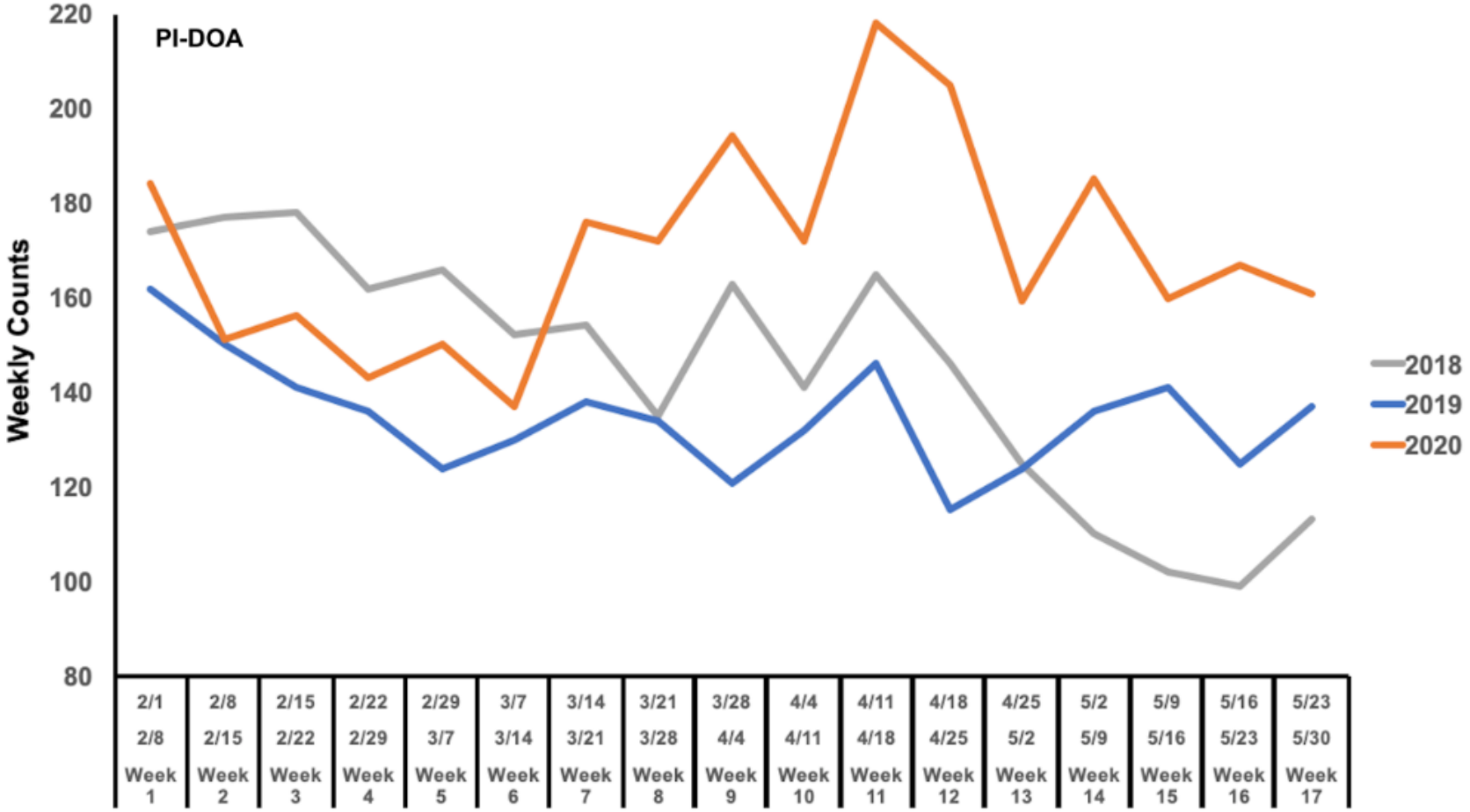
	2020	2018-19	Difference	95% CI	p-value
	Feb 1 to May 29 (17 weeks)				
OHCA Response times, mean (SD), min	4.99±0.25	4.77±0.36	0.22	0.02, 0.42	0.031
STEMI Response times, mean (SD), min	4.90±0.55	4.73±0.42	0.17	-0.10, 0.45	0.213
Field Defibrillation, N (%)	318/2017 (15.77%)	741/3386 (21.88%)	-6.12%	-8.20, -3.97	<0.001
Field ROSC, N (%)	365/2017 (18.10%)	978/3386 (28.88%)	-10.79%	-13.02, -8.48	<0.001
Transported, N (%)	591/2017 (29.30%)	1582/3386 (46.72%)	-17.42%	-19.99, -14.79	<0.001
	After March 19 (11 weeks)				
OHCA Response times, mean (SD), min	5.13±0.17	4.71±0.40	0.42	0.19, 0.64	0.001
STEMI Response times, mean (SD), min	5.08±0.55	4.67±0.44	0.41	0.09, 0.73	0.015
Field Defibrillation, N (%)	210/1326 (15.84%)	475/2088 (22.75%)	-6.91%	-9.55%, -4.26%	<0.001
Field ROSC, N (%)	226/1326 (17.04%)	606/2088 (29.02%)	-11.98%	-14.76%, -9.18%	<0.001
Transported, N (%)	344/1326 (25.94%)	980/2088 (46.93%)	-20.99%	-24.12%, -17.76%	<0.001
	Before March 19 (6 weeks)				
OHCA Response times, mean (SD), min	4.75±0.19	4.89±0.27	-0.14	-0.45, 0.17	0.372
STEMI Response times, mean (SD), min	4.56±0.35	4.83±0.36	-0.27	-0.70, 0.16	0.229
Field Defibrillation, N (%)	108/691 (15.63%)	266/1298 (20.49%)	-4.86%	-8.36%, -1.37%	20
Field ROSC, N (%)	139/691 (20.12%)	372/1298 (28.66%)	-8.54%	-12.37%, -4.68%	<0.001
Transported, N (%)	247/691 (35.75%)	602/1298 (46.38%)	-10.63%	-15.05%, -6.19%	<0.001
	After March 19	**Before March 19**	**Difference**	**95% CI**	**p-value**

	2020 Only (17 weeks)				
OHCA Response times, mean (SD), min	5.13±0.17	4.75±0.19	0.38	0.07, 0.69	0.021
STEMI Response times, mean (SD), min	5.08±0.55	4.56±0.35	0.52	0.08, 0.96	0.024
Field Defibrillation, N (%)	210/1326 (15.84%)	108/691 (15.63%)	-0.21	-3.14%, 3.55%	0.903
Field ROSC, N (%)	226/1326 (17.04%)	139/691 (20.12%)	-3.08%	-6.74%, 0.51%	0.089
Transported, N (%)	344/1326 (25.94%)	247/691 (35.75%)	-9.81%	-14.11%, -5.54%	<0.001
	2018-19 Only (17 weeks)				
OHCA Response times, mean (SD), min	4.71±0.40	4.89±0.27	-0.18	-0.44, 0.08	0.175
STEMI Response times, mean (SD), min	4.67±0.44	4.83±0.36	-0.16	-0.46, 0.14	0.287
Field Defibrillation, N (%)	475/2088 (22.75%)	266/1298 (20.49%)	2.26%	-0.61%, 5.06%	0.123
Field ROSC, N (%)	606/2088 (29.02%)	372/1298 (28.66%)	0.36%	-2.80%, 3.47%	0.821
Transported, N (%)	980/2088 (46.93%)	602/1298 (46.38%)	0.55%	-2.91%, 4.01%	0.753

CI – Confidence intervals, SD – Standard deviation, OHCA – out of hospital cardiac arrest, STEMI – ST elevation myocardial infarction, ROSC – Return of spontaneous circulation

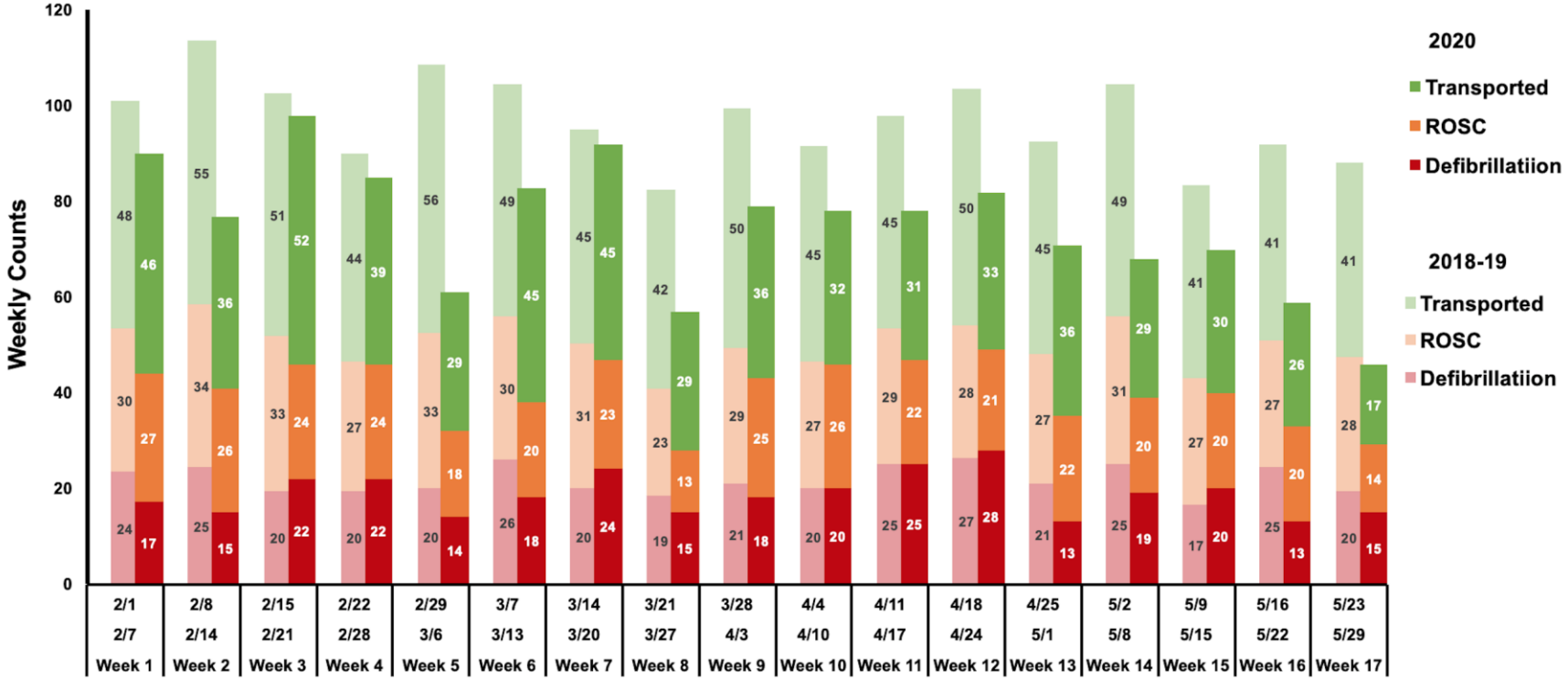
Figure S1. Weekly counts for Primary Impression – Dead on Arrival (PI-DOA) during 2020 compared to 2018-19.

Weekly counts of PI-DOA were significantly greater in 2020 (21% increase during the study period, as compared to 2018-19), with the increase largely beginning around the time of the March 19 stay-at-home order.



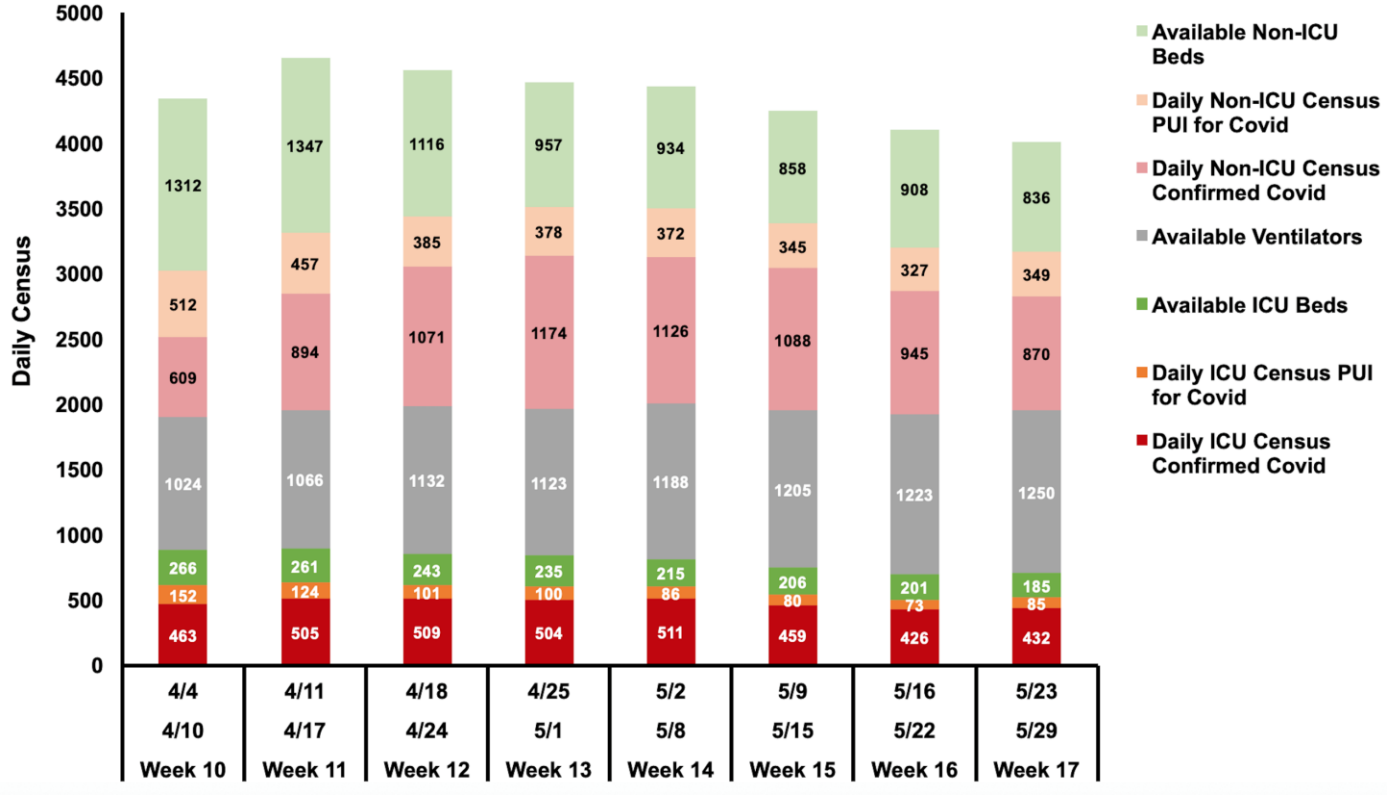
Weekly counts of PI-DOA were significantly greater in 2020, as compared to 2018 and 2019 individually, with the increase largely beginning around the time of the March 19 stay-at-home order.

Figure S2. The average weekly counts for patients receiving field defibrillation, return of spontaneous circulation (ROSC) and those transported to the hospital.



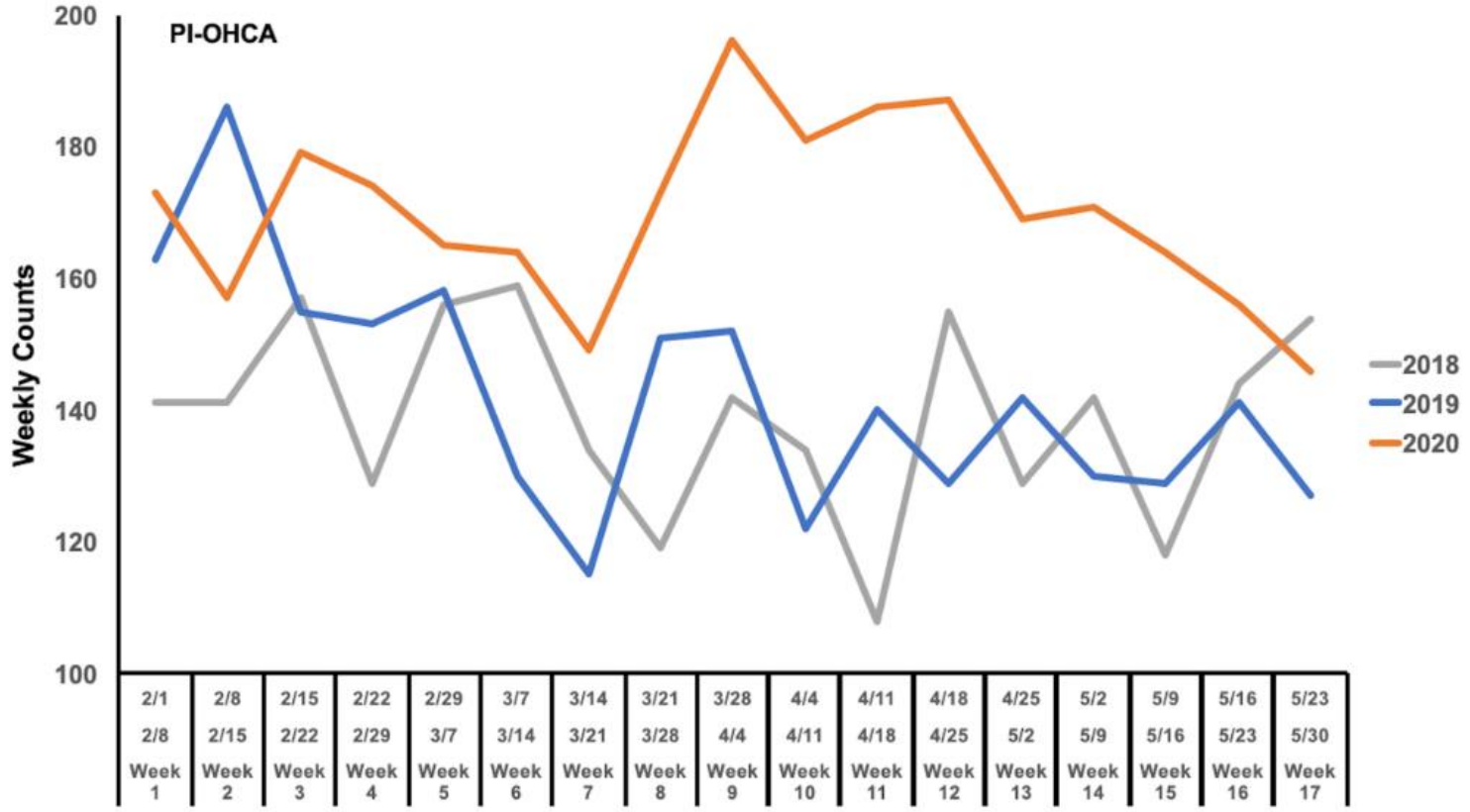
A decrease in weekly counts was noted for field defibrillation, ROSC and transport during 2020 compared with 2018-19. This data includes 2/3 of the EMS responses as patient level data was not available for one of the 29 EMS agencies.

Figure S3. Daily census for 70 Los Angeles County (LAC) 911-receiving hospitals with 19,500 licensed beds since April 2020 for confirmed COVID-19 cases, patients under investigation (PUI) for COVID-19, available staffed intensive care unit (ICU) and non-ICU beds, and mechanical ventilators.

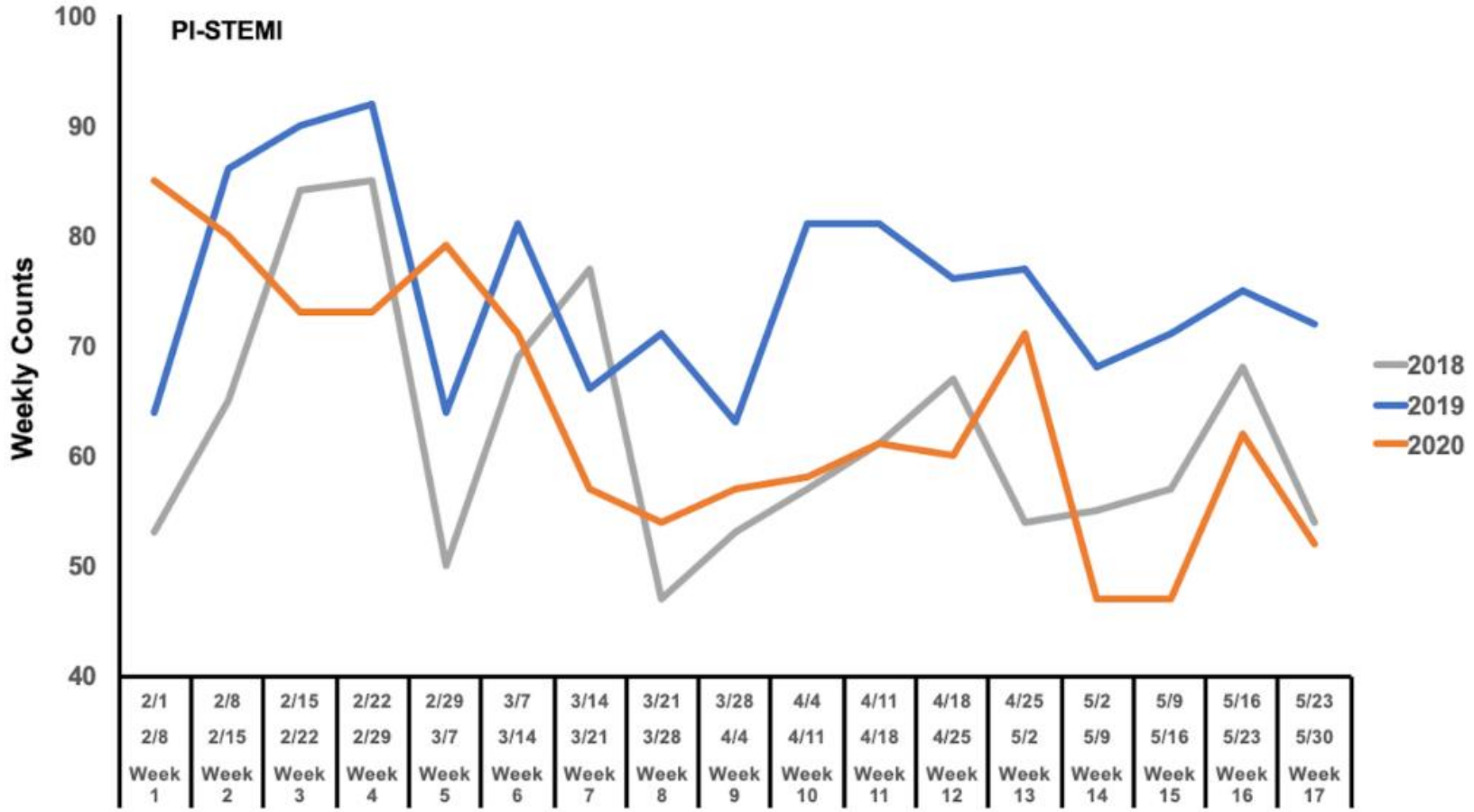


Throughout the COVID-19 pandemic, LAC maintained daily availability of staffed ICU (228±36) and non-ICU (1043±210) beds and mechanical ventilators (1145±110).

Figure S4. Weekly counts of Primary Impression – Out-Of-Hospital Cardiac Arrest (PI-OHCA) and Primary Impression – STEMI (PI-STEMI) in 2018, 2019, and 2020.



Weekly counts of PI-OHCA were substantially similar in 2018 and 2019 and both were significantly less than 2020 counts starting around the time of the March 19 stay-at-home order.



Though weekly counts of PI-STEMI beginning around the time of the March 19 stay-at-home order were significantly less in 2020 compared to 2019, weekly PI-STEMI counts in 2018 are not significantly different. We chose to compare 2020 to 2018-19 averages to better account for the apparent annual variability between 2018 and 2019.

County of Los Angeles
Department of Health Services
EMERGENCY MEDICAL SERVICES COMMISSION

PROVIDER AGENCY ADVISORY COMMITTEE

MINUTES

Wednesday, August 18, 2021

Due to the ongoing COVID-19 pandemic and to comply with the Health Officer's Order on Social Distancing, this meeting was conducted via ZOOM conference call-in. General public and Committee Members' attendance was verified by presence of name on the participant list. Quorum was reached and the meeting continued.

MEMBERSHIP / ATTENDANCE

MEMBERS	ORGANIZATION
☑ Robert Ower, Chair	EMSC, Commissioner
☑ Kenneth Powell, Vice-Chair	EMSC, Commissioner
☑ Jeffrey Rollman	EMSC, Commissioner
☐ Paul Rodriguez	EMSC, Commissioner
☐ Brian Bixler	EMSC, Commissioner
☐ John Hisserich	EMSC, Commissioner
☑ Sean Stokes	Area A (Rep to Medical Council)
☑ Justin Crosson	Area A, Alt.
☑ Dustin Robertson	Area B
☐ Clayton Kazan, MD	Area B, Alt.
☑ Todd Tucker	Area C
☐ Ken Leasure	Area C, Alt.
☑ Ivan Orloff	Area E
☑ Kurt Buckwalter	Area E, Alt.
☐ Wade Haller	Area F
☐ Andrew Reno	Area F, Alt.
☐ Alec Miller	Area G *(Rep to BHAC)*
☑ Jennifer Nulty	Area G, Alt. *(Rep to BHAC, Alt.)*
☑ Doug Zabilski	Area H
☐ Anthony Hardaway	Area H, Alt.
☐ Matthew Potter	Area H, Alt. *(Rep to DAC)*
☑ Julian Hernandez	Employed Paramedic Coordinator
☐ Tisha Hamilton	Employed Paramedic Coordinator, Alt.
☐ Rachel Caffey	Prehospital Care Coordinator
☐ Jenny Van Slyke	Prehospital Care Coordinator, Alt.
☑ Andrew Respicio	Public Sector Paramedic
☑ Daniel Dobbs	Public Sector Paramedic, Alt.
☐ Maurice Guillen	Private Sector Paramedic
☐ Scott Buck	Private Sector Paramedic, Alt.
☑ Ashley Sanello, MD	Provider Agency Medical Director
☐ Vacant	Provider Agency Medical Director, Alt.
☐ Andrew Lara	Private Sector Nurse Staffed Ambulance Program
☐ Gary Cevello	Private Sector Nurse Staffed Ambulance Program, Alt.
☑ Michael Kaduce	EMT Training Program
☑ Scott Jaeggi	EMT Training Program, Alt.
☐ David Mah	Paramedic Training Program
☐ David Fillip	Paramedic Training Program, Alt.

EMS AGENCY STAFF (Virtual)	
Marianne Gausche-Hill, MD	Cathy Chidester
Nichole Bosson, MD	Richard Tadeo
Denise Whitfield, MD	Dipesh Patel, MD
Jennifer Calderon	Chris Clare
Natalie Greco	Cathlyn Jennings
Laurie Lee-Brown	Laura Leyman
Susan Mori	Lorrie Perez
Karen Rogers	John Telmos
Christine Zaiser	Gary Watson
Kelsey Wilhelm, MD (EMS Fellow)	

PUBLIC ATTENDEES (Virtual)	
Christina Eclarino	LA County Public Health
Amber Larkins	LA County Public Health
Kelsey Oyong	LA County Public Health
Marc Cohen, MD	Three area FDs
Erick Cheung, MD	Psychiatrist – UCLA Health
Adrienne Roel	Culver City FD
Roger Braum	Culver City FD
Daniel Nausha	Pasadena FD
Richard Oishi	Arcadia FD
Johnna Corbett	UCLA Ctr for Prehosp Care
Britney Alton	Burbank FD
Catherine Borman	Santa Monica FD
Shane Cook	LACoFD
Steve Sanko, MD	LAFD
Puneet Gupta, MD	LACoFD
Saman Kashani, MD	LACoFD
Sameer Mistry, MD	Three Ambulance Co.s
Drew Bernard, MD	Emergency Ambulance
Laurie Stolp	LAFD
Aspen Di-Ilolo	Monterey Park FD
Paula LaFarge	LACoFD
Luis Manjarrez	Glendale FD
Jennifer Breeher	Alhambra FD
Yun Son Kim	LACoFD
Ilse Wogau	LACoFD
Tina Ziolkowski	Los Angeles FD
Dave Smith	Redondo Bch FD
Brent Bartlett	Sierra Madre FD
Ryan Jorgensen	La Habra Heights FD
Karen Bustillos	Sierra Madre FD
Andrew Pachon	
Cassandra Lane	

LACAA – Los Angeles County Ambulance Association LAAFCA – Los Angeles Area Fire Chiefs Association BHAC – Base Hospital Advisory Committee DAC – Data Advisory Committee

1. **CALL TO ORDER:** 1:00 p.m.: Chair, Robert Ower, called meeting to order.

2. **INTRODUCTIONS / ANNOUNCEMENTS / PRESENTATIONS**

2.1 Pediatric Emergency Care Coordinator Workforce Collaborative *(Marianne Gausche-Hill, MD)*

- This workforce allows provider agencies to designate an individual who is assigned the role of a pediatric emergency care coordinator [at the EMS level] to participate in a national quality improvement collaborative.
- This workforce will meet monthly and plan to bring in subject matter experts and provide resources for our EMS provider agencies and hospitals.
- Sign-up for being part of this collaborative was due August 15. However, if still interested in participating, providers may contact Dr. Gausche-Hill via email (MGausche-Hill@dhs.lacounty.gov)

2.2 Joint Education Session: September 7, 2021 *(Marianne Gausche-Hill, MD)*

- The next joint educational session will be on September 7, 2021 at 11:45 am. This session will begin immediately after the Pediatric Advisory Committee and before Medical Advisory Council.
- Topics for this session include the early warning signs of an impending earthquake and how this may assist EMS; and a discussion of possible nuclear detonations, how to protect yourself and how to survive after detonation.
- To attend this session via ZOOM on September 7, following this link: https://us06web.zoom.us/j/84469959023?pwd=ekFPenhLOHdqZmllVzgwajhtQk5EQT09 (Meeting ID: 844 6995 9023)

3. **APPROVAL OF MINUTES (Tucker/Kaduce)** June 16, 2021 minutes were approved as written.

4. **REPORTS & UPDATES**

4.1 Disaster Services Update

4.1.1 EMS Personnel Influenza Vaccination Rate for 2020-2021
(Kelsey Oyong, Los Angeles County Department of Public Health)

- Presentation given on the results from the Influenza vaccination survey that was conducted by the Department of Public Health and the EMS Agency in July 2021.
- Data was collected included the number of EMS personnel employed; the number of personnel who were vaccinated during the 2020-2021 influenza season; and if paramedics were approved to administer the vaccine within their agency.
- There were 57 out of 61 provider agencies who responded to this survey.

Survey results revealed the following:

- Of the 8251 personnel represented by providers who responded to this survey, 5023 personnel (61%) were vaccinated against the 2020-2021 influenza.
- Exclusive Operation Area (EOA) providers had an increased number of personnel vaccinated, compared to all other (public/private) providers.
- 27 providers (about half of the total) received approval to administer the influenza vaccine. Those agencies with approval to administer the vaccine, had a higher rate of personnel who were vaccinated.

Ms. Oyong thanked Amber Larkins, Christina Eclarino and Zack Rubin from the Department of Public Health; and Roel Amara and Jennifer Calderon from the EMS Agency, for their collaboration during this survey process.

4.1.2 Local Optional Scope of Practice – Vaccine Administration *(Marianne Gausche-Hill, MD)*
Current Optional Scope of Practice (OSP), allowing paramedics and EMTs to participate in vaccination programs, is set to expired on September 30, 2021. The EMS Agency has applied to the State EMS Authority for an extension of this OSP and will most likely be approved through the end of the year, possibly longer.

Providers who are interested in obtaining approval for this OSP, may contact Marianne Gausche-Hill, MD at MGausche-Hill@dhs.lacounty.gov

4.2 COVID-19 Update *(Marianne Gausche-Hill, MD)*
The following COVID-19 update for Los Angeles County was provided:

- The number of positive COVID-19 cases have increased but has not reached the numbers seen during the winter's peak (prior to vaccination). During the winter peak, the California variant was found in 40% of all COVID cases; the current Delta variant is seen in 90% of all COVID cases.
- The following EMS Agency policies remain in place:
  - Reference No. 503, Guidelines for Hospitals Requesting Diversion of ALS/BLS Patients.
  - Reference No. 855, Hospital EMS Surge Assistant Plan: COVID-19 Response.
- The number of EMTs staffing ambulances have decreased due COVID. Possibly related to a decline in number of EMT students and the inability to secure clinical time.
- The EMS Agency will be working with hospitals to discuss whether proof of vaccination will be required during Interfacility Transfers (IFTs) and 9-1-1 transports. However, when EMS personnel enter a hospital, vaccination status should not be a concern when EMS personnel are wearing their PPE.
- Paramedic training programs and EMT schools will need to comply with the current Health Officer's Order, requiring all EMS personnel be vaccinated by September 30, 2021. Looking forward, everyone entering a training program, will be required to have received the COVID-19 vaccine.
- On August 20, 2021, Hospital Association of Southern California (HASC) will be meeting with several hospitals, law enforcement representatives, and public/private providers to discuss the COVID-19 vaccine requirements when entering hospitals.
- EMS Agency medical director stressed the importance that all providers should be wearing full PPE during patient contacts.

4.3 EMS Update 2021 *(Denise Whitfield, MD)*

- There have been greater than 3000 providers who have completed EMS Update 2021.
- Providers are reminded that this Update must be completed by August 31, 2021.
- Notifications will be sent to all provider agencies listing who has/has not completed EMS Update.

4.4 ITAC Update *(Denise Whitfield, MD)*
Previous meeting was held on August 2, 2021. The following products are currently being reviewed and recommendations will be provided in the near future:

- BD™ Intraosseous Vascular Access System
- DeChoker© (foreign body removal device)
- Inflatable backboards

4.5 EmergiPress *(Denise Whitfield, MD)*

- The next EmergiPress will be posted on the EMS Agency's webpage at the end of August 2021.

- Dr. Whitfield thanked Los Angeles County Fire Department for allowing EmergiPress to post the fire department's online training module titled "Sirens of Silence", focusing on Autism Spectrum Disorder.

4.6 Research Collaboratives (*Nichole Bosson, MD)*

Dr. Bosson discussed two publications coming out soon:

- Standardized formulary to reduce pediatric dosage errors
- Variations in post-cardiac arrest care (focusing on in-hospital management after cardiac arrests)

The EMS Agency continues to work with the Stroke, SRC, Trauma and Pediatric data collaboratives.

4.7 ECMO Update *(Nichole Bosson, MD)*

- Pilot study is ongoing – there have been four enrollments thus far.
- Los Angeles Fire Department and Santa Monica Fire Department has recently joined this pilot.
- For providers who are participating in this pilot: patients with refractory ventricular fibrillation (out of hospital cardiac arrest), who are within 30 minutes of an ECMO center, are to be directed to this ECMO center.
- Providers transporting to an ECMO center should contact the ECMO receiving facility directly.
- A new policy and radio checklist has been developed to facilitate communication between the provider and ECMO centers.

4.8 I-Gel® Pilot *(Nichole Bosson, MD)*

- Currently, there have been 40 patients enrolled.
- Pilot study is ongoing through the end of September 2021.
- Pilot going very well, with provider feedback stating iGel is easy to place and easy to ventilate. Regurgitation is the only minor concern being reported and is under review.
- Once pilot is completed, the collected data will be reported.

4.9 Health Data Exchange *(Richard Tadeo)*

- This project is on hold due to the funds being reallocated elsewhere.

5. UNFINISHED BUSINESS

There was no unfinished business.

6. NEW BUSINESS

6.1 Cardiac Arrest Patient Destination *(Chris Clare)*

- Since June 1, 2021, the EMS Agency has been entering data into the Cardiac Arrest Registry for Enhanced Survival (CARES). This national registry takes all patients from non-traumatic cardiac arrests, the EMS data and hospital data. This registry analyzes the data to identify potential prehospital treatments to improve patient survivability.
- While entering the data into the database, the EMS Agency has noticed that not all cardiac arrests are being transported to an SRC. This makes it challenging to get the outcome data on the patients.
- Providers are reminded to ensure that all non-traumatic cardiac arrest patients are transported to an SRC (Per Reference No. 516, Cardiac Arrest (Non-Traumatic) Patient Destination. Traumatic cardiac arrest patients are to be transported to a trauma center.
- Committee member recommended that Reference No. 1210, Treatment Protocol: Cardiac Arrest, be revised to include the above information and to include wording on utilizing ECMO pilot protocols.

6.2 Comprehensive Stroke Centers – Level I and Level II (Reference No. 501)
(Marianne Gausche-Hill, MD)

Dr. Gausche-Hill reviewed the revisions being made to Reference No. 501, 9-1-1 Receiving Hospital Directory. This was presented as information only.

- The revision lists whether a Stroke Receiving Center (SRC) is a Level I SRC or a Level II SRC. (Primarily Level I CSC has 24/7 neurosurgeon on site and a Level II CSC is thrombectomy capable.
- **This addition to the policy does not affect the routing of the patient.**

6.3 Reference No. 834.1, Patient Refusal or Treatment/Transport and Treat & Release at Scene – Quick Reference Guide *(Richard Tadeo)*

Policy reviewed and approved as written.

M/S/C (Orloff/Hernandez) Approved Reference No. 834.1, Patient Refusal or Treatment/Transport and Treat & Release at Scene – Quick Reference Guide.

6.4 Reference No. 838, Application of Patient Restraints
(Marianne Gausche-Hill, MD & Erick Cheung, MD)

6.4.1 Reference No. 1208, Agitated Delirium
6.4.2 Reference No. 1208-P, Agitated Delirium (Pediatric)
6.4.3 Reference No. 1209, Behavioral / Psychiatric Crisis
6.4.4 Reference No. 1209-P, Behavioral / Psychiatric Crisis (Pediatric)
6.4.5 Reference No. 1307, MCG: Care of the Patient with Agitation
6.4.6 Reference No. 1307.1, MCG: Flowchart for Initial Approach to Scene Safety
6.4.7 Reference No. 1307.2, MCG: Verbal De-Escalation
6.4.8 Reference No. 1307.3, MCG: Table of Common Etiologies of Agitation, Field Presentation, Likelihood Verbal De-Escalation
6.4.9 Reference No. 1318, MCG: Evaluation and Care of Patients at Risk of Suicide
6.4.10 Reference No. 1318.1, MCG: Suicide Risk Screening (C-SSRS EMT/Firefighter

After lengthy discussion, Committee APPROVED the CONCEPTS of each policy listed in Sections 6.4 through 6.4.10, with the recommendation that these policies return to this Committee for further review.

M/S/C (Ower/Hernandez) Approved of concepts to policies listed above [6.4 through 6.4.10], with recommendation.

6.5 Reference No. 1317.9, MCG: Drug Reference – Atropine *(Marianne Gausche-Hill, MD)*
Reference No. 1212, Treatment Protocol: Cardiac Dysrhythmia - Bradycardia

Policies presented as Information Only.

6.6 Reference No. 703, ALS Unit Inventory *(John Telmos)*

After lengthy discussion, Committee requested this policy be tabled.

TABLED: Reference No. 703, ALS Unit Inventory.

6.7 Reference No. 620, EMS Quality Improvement Program *(Susan Mori)*

Due to time constraint, this policy was not reviewed. Policy tabled until next Committee meeting.

TABLED: Reference No. 620, EMS Quality Improvement Program.

OPEN DISCUSSION

7.1 Reporting Submersion in Pools and Spas to Public Health *(Richard Tadeo)*

- A Board of Supervisors' Motion was recently passed requiring EMS providers to report to the Department of Public Health drowning incidents in public pools and spas. Reference Nos, 1210 & 1210-P – Treatment Protocol: Cardiac Arrest (Non-Traumatic), and Reference Nos, 1225 &1225-P – Treatment Protocol: Submersion, were revised to include this mandatory reporting requirement and the 24-hour telephone number to report drowning incidents. The Committee endorsed the revisions in these four (4) Treatment Protocols.
- The EMS Agency will finalize the revisions and distribute to all providers with an effective date of October 1, 2021, to allow enough time to inform EMS providers of this new Board Motion.

8. NEXT MEETING: October 20, 2021

9. ADJOURNMENT: Meeting adjourned at 3:50 p.m.

DEPARTMENT OF HEALTH SERVICES
COUNTY OF LOS ANGELES

SUBJECT: **PATIENT REFUSAL OF TREATMENT/TRANSPORT AND TREAT AND RELEASE AT SCENE QUICK REFERENCE GUIDE** REFERENCE NO. 834.1

If EMS has assessed a patient who has a medical complaint and DOES NOT want transport to the hospital, this guide may be used to assist in determining the need for AMA; Assess, Treat and Release; or Treatment in Place

STEP 1 - Does the patient have Decision-Making Capacity?

The patient understands and can verbalize the risks/consequences of not receiving treatment / transport ideally in their own words – as EMS has described and EMS believes the patient has decision-making capacity

- Yes → Is there an Authorized Health Care Provider (HCP) on scene?
  - No → **STEP 2 - Does the patient have an emergency medical condition?**
    - *Abnormal vital signs (except isolated asymptomatic HTN)*
    - *Meets Base Contact Requirements (Ref. 1200.1)*
    - *In the PM/EMT judgment, patient has an immediate need for medical attention*
    - No → **STEP 3 - Does the patient have a High-Risk Chief Complaint / Features OR Social Risk Factors?**
      - ***High-Risk Chief Complaints:*** *Chest Pain, Abdominal Pain, GI Bleeding, Pregnancy, Syncope Neurologic symptoms (including dizziness/vertigo, weakness, visual changes), and ALOC*
      - ***High-Risk Features:***
        - *Age <12 months or >70 years old*
        - *Patient with complicating co-morbidities: active cardiac, respiratory, liver or kidney disease, cancer, neurologic disease, or immunocompromised*
      - ***Social Risk Factors:*** *Homelessness, Congregate Living, Skilled Nursing Facility, Long Term Care Facility*
      - No → Assess, Treat & Release
      - Yes → Against Medical Advice (AMA)
    - Yes → Against Medical Advice (AMA)
  - Yes → Meets "Treatment in Place"
    - *Patient may be treated in place or medically cleared by authorized HCP*
    - *AMA required if patient meets Base Contact Requirements*
- No → Treat / Transport
- Uncertain → Base Contact

Against Medical Advice (AMA) → Does the patient meet Base Contact Requirement or is EMS concerned?

- No → Base Contact not required
- Yes → Base Contact required for AMA

Make every attempt to contact Base before patient leaves the scene. Base may want to speak with the patient

Reference No. 1124, Disaster Preparedness Exercise/Drills

	Committee/Group	Date Assigned	Approval Date	Comments* (Y if yes)
EMS ADVISORY COMMITTEES	Provider Agency Advisory Committee			
	Base Hospital Advisory Committee			
	Data Advisory Committee			
	Education Advisory Committee			
OTHER COMMITTEES/RESOURCES	Medical Council			
	Trauma Hospital Advisory Committee			
	Ambulance Advisory Board			
	EMS QI Committee			
	Hospital Association of So California			
	County Counsel			
	Other: Disaster Coalition Advisory Board	6/2/21	6/2/21	N

***** See **Summary of Comments** (Attachment B)

SUBJECT: **DISASTER PREPAREDNESS EXERCISES/DRILLS** REFERENCE NO. 1124

PURPOSE: To provide guidelines for conducting system wide disaster preparedness exercises and drills with the Emergency Medical Services (EMS) participants in Los Angeles County (LAC). This policy defines the roles of EMS provider agencies, health care facilities and the EMS Agency during disaster preparedness exercises and drills.

PRINCIPLE:

1. Disaster preparedness exercises/drills should involve but not limited to active participation from Health Care Coalition (HCC) partners which includes: prehospital care personnel, hospital, ancillary healthcare providers (Ambulatory Surgery Centers, Community Clinics, Coroner, Dialysis Centers, Emergency Management Departments, Home Health and Hospice Centers, Long Term Care Centers), and EMS Agency staff to improve coordination and communication between all involved entities.

2. Coordination between prehospital care personnel, receiving facilities, and the EMS Agency allows for maximum resource allocation and efficient patient distribution.

3. Exercises and drills that simulate realistic situations and are planned carefully with clear objectives to permit evaluation of response plans as well as identifying training needs. County facilitated exercises/drills will follow the Homeland Security Exercise and Evaluation Program (HSEEP) standards.

POLICY:

I. Statewide Medical and Health Exercise (SWMHE) – annual exercise that includes all HCC partners and governmental agencies.

   A. Hospitals and clinics participating in the Hospital Preparedness Program (HPP) are required to participate in the annual SWMHE.

   B. When invited by a hospital or clinic, provider agencies should participate in the annual SWMHE including exercise planning sessions and after-action debriefings conducted by the hospital or clinic, whenever possible.

   C. In the absence of the annual SWMHE, LAC EMS Agency may conduct a Countywide Medical and Health Exercise in its place.

II. LAC EMS Agency Exercise – drills and exercises sponsored by the EMS Agency. These are conducted with LAC HCC partners.

   A. Satellite Radio Drill

APPROVED: _____ _____
Director, EMS Agency Medical Director, EMS Agency

1. This drill will be conducted quarterly on the first Thursday of March, June, September and December at 3:00 PM. All facilities that possess a LAC MRSAT satellite radio phone are required to participate.

2. The EMS Agency will initiate the drill utilizing the satellite radio system purchased with Hospital Preparedness Program (HPP) funds. Participants will be polled using a roll call system on the established LA DRC network.

3. The drill will conclude once all participants have responded to the roll call or after three attempts whichever comes first.

4. The EMS Agency will contact non-respondents by email or phone after the drill concludes to notify the facility that they were not connected to the LA DRC network or that a response was not heard.

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B. HAvBED Drill- See Ref. No. 1122, Bed Availability Report

C. Provider Agency Multiple Casualty Incident (MCI) Drills – designed for provider agencies and the EMS Agency to expediently and efficiently determine patient origins and destinations based on resource availability of hospitals.

1. The provider agency generally initiates the drill by:

   a. Pre-arranged drill – EMS Agency is notified in advance and provided with specific information regarding the date, time and nature of the drill.

   b. Random unannounced drill – EMS Agency is contacted by the provider agency without prior notification. The EMS Agency may poll hospitals for resource availability or provide patient destination as requested by the provider agency.

2. The EMS Agency may request a pre-arranged MCI drill with a provider agency for training purposes of MAC staff.

3. Analysis and evaluation of the drill may be conducted jointly by the provider agency and the EMS Agency.

E. Regional Exercises/Drills – designed to train, test and validate plans and capabilities, and identify areas for improvement amongst the HCC partners.

1. All HPP participants will participate in exercises and drills in conjunction with LAC and community partners to ensure preparedness, as per the HPP exhibit (e.g., Regional decontamination drill, HCC Surge exercise, SWMHE Table Top).

2. Any Non-HPP participants may be invited to participate in any or all exercises/drills.

CROSS REFERENCE:

California Civil Code, Section 56.10 (c) (1)

Prehospital Care Manual:
Ref. No. 519, **Management of Multiple Casualty Incidents**
Ref. No. 1122, **Bed Availability Reporting**
Ref. No. 1122.1, **Bed Availability Report**

Reference No. 834.1, Patient Refusal of Treatment/Transport and Treat and Release at Scene, Quick Reference Guide

	Committee/Group	Date Assigned	Approval Date	Comments* (Y if yes)
EMS ADVISORY COMMITTEES	Provider Agency Advisory Committee	8/18/21	8/18/21	
	Base Hospital Advisory Committee	8/11/21	8/11/21	
	Data Advisory Committee			
	Medical Council			
OTHER COMMITTEES/RESOURCES	Trauma Hospital Advisory Committee			
	Ambulance Advisory Board			
	EMS QI Committee			
	Pediatric Advisory Committee			
	County Counsel			
	Other:			

***** See **Summary of Comments** (Attachment B)

CITY OF LONG BEACH PRESS

PRESS RELEASE
(Spanish)
(Khmer)

August 20, 2021
Contact: City of Long Beach Joint Information Center, 562.570.NEWS, jic@longbeach.gov

For Immediate Release

First Responders Work Together to Reduce Use of Force Through Integrated Medical Intervention Response Pilot Program

Long Beach, CA - The Long Beach Police Department, Long Beach Fire Department and Department of Disaster Preparedness and Emergency Communications (DPEC) have come together to implement an Integrated Medical Intervention Response (IMR) pilot program. The collaborative program is designed to reduce use of force incidents by providing medical assistance on calls for service involving agitated, combative or violent individuals.

“Our officers periodically come into contact with individuals exhibiting different types of behaviors,” said Police Chief Robert G. Luna. “This innovative and collaborative approach to addressing situations with such individuals is groundbreaking. Already, we’ve leveraged this plan to create a safer environment for our community members and first responders.”

As part of the implementation of the alternative response pilot program, a new radio dispatch code, known as 647V-Intoxicated Person Potentially Violent, was introduced on January 1, 2021. The code initiates a unique dual response of both Long Beach Police Department and Long Beach Fire Department personnel that the City is using for the first time. Additionally, approximately 500 sworn police personnel, 336 firefighters and all 62 dispatchers together completed several coordinated training sessions this past spring as part of the program to learn to better recognize the symptoms of various serious medical conditions.

Individuals encountered by first responders may be under the influence of drugs or alcohol, suffer from mental illness or uncontrolled anger, or a combination of factors. In some cases, unusual behavior may be associated with serious medical conditions.

“The EMS Agency oversees and coordinates medical care of patients treated by 911 responders,” said Department of Health Services, Los Angeles County EMS Agency Director Cathy Chidester. “As such, we are very pleased that Long Beach Police and Fire Departments have chosen to enhance our medical protocols by adding coordinated training and communication techniques to quickly recognize and safely treat the patients experiencing severe agitation. These are very complex and high-risk situations and this enhanced communication and coordination helps to ensure that everyone involved in the response is safe. We are encouraging other departments to adopt this specialized training program.”

While emergency response units are en route to a 647V call, they develop a coordinated plan for de-escalation. Upon arrival, they may need to safely restrain individuals suffering from agitated delirium to minimize stress and injury to the patient and those around them. This agitated state is often the result of alcohol intoxication, the influence of drugs, mental illness, uncontrolled anger or a combination of factors. Paramedics will then perform a medical evaluation. If paramedics determine that the patient requires medical management to ensure their safety and the safety of others, they initiate treatment, which can include a sedative called Midazolam, administered by nasal spray or injection.

“Managing acute medical conditions with medicine is something paramedics do every day and handling patients that are a danger to themselves or others is medically necessary,” said Long Beach Fire Department Medical Director Dr. Tiffany Abramson. “We must adjust the way we respond to these incidents. Once a patient can de-escalate and begin to relax, additional care can be rendered without the use of more invasive techniques that may cause additional harm. Saving lives remains our top priority.”

Oftentimes, when first responders are called to treat an individual experiencing agitated delirium, no sedative is needed. Officers’ first priority is to apply trained de-escalation techniques to diffuse the situation and control the patient so they can be transported to a hospital for evaluation and treatment. Officers are usually successful in achieving this goal without any application of force.

Since the creation of the specific 647V dispatch code in January 2021, an IMR response has been used 137 times; of these incidents, medical intervention using a sedative was used to de-escalate the situation 31% of the time, successfully protecting agitated, combative, or violent individuals from injuring themselves, while also protecting others around them and first responders from injury.

“This type of response is imperative in continuing to ensure the health and safety of our community during calls for service,” said Director of Disaster Preparedness and Emergency Communications Reggie Harrison. “Through this response plan, our first responders are more refined in assessing individuals exhibiting severe agitation by

quickly identifying physical characteristics as well as physiological and communication cues. Everyone responding to the scene is now better prepared for these situations."

The coordinated training, communication and medical response techniques in such complex and high-risk situations are helping to ensure that everyone involved in the response is safe, and public safety officials are seeing a notable improvement in the de-escalation of situations that could have resulted in greater conflict.

"A coordinated approach to handling escalating situations in the field is essential," said Fire Chief Xavier Espino. "We are encouraging other departments across the country to adopt this specialized training program, and they are listening because it works. Rapid intervention during a medical crisis saves lives and leads to better outcomes."

About the City of Long Beach
Home to approximately 470,000 people, the multiple award-winning and innovative City of Long Beach offers all the world-class amenities of a large metropolitan city while maintaining a strong sense of individual and diverse neighborhoods nestled together along the California coast. As a full-service charter city, Long Beach is home to the Queen Mary, Aquarium of the Pacific, several museums and theaters, a highly-rated school district, Long Beach Airport, the Port of Long Beach, as well as many award-winning City departments such as Health, Parks, Recreation and Marine, Development Services, Public Works and more. The City also has a highly respected university and city college, two historic ranchos, five hospitals, 12 libraries, five golf courses, 169 parks, miles of beaches, marinas, bike paths and a Bike Share program.

For more information about the City of Long Beach, visit longbeach.gov. Watch us on LBTV. Follow us on social to keep up with the latest news: Facebook, Twitter, Instagram and YouTube.

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3.20.040 - Composition.

The commission shall be composed as follows:

A. An emergency physician in a Los Angeles County paramedic base hospital nominated by the California Chapter of the American College of Emergency Physicians;

B. A physician practicing in Los Angeles County nominated by the American Heart Association, Western States Affiliate;

C. A mobile intensive care nurse nominated by the Greater Los Angeles Chapter of the Emergency Nurses Association;

D. An administrator from a hospital in Los Angeles County nominated by the Hospital Association of Southern California;

E. A representative of a public provider agency nominated by the Los Angeles Chapter of California Fire Chiefs Association;

F. A representative of a private provider agency nominated by the Los Angeles County Ambulance Association;

G. A trauma surgeon who practices in Los Angeles County at a designated trauma center nominated by the Southern California Chapter American College of Surgeons;

H. A psychiatrist practicing in Los Angeles County nominated by the Southern California Psychiatric Society;

I. A physician practicing in Los Angeles County nominated by the Los Angeles County Medical Association;

J. A licensed paramedic who is accredited in Los Angeles County nominated by the California State Firefighters Association, Emergency Medical Services Committee;

K. Five public members, one nominated by each member of the Board of Supervisors. No public member shall be a medical professional or affiliated with any of the other nominating agencies;

L. A law enforcement representative nominated initially by the California Highway Patrol. After the first term of office for this position is completed, the law enforcement representative shall be nominated by the Los Angeles County Peace Officers Association;

M. A city manager nominated by the League of California Cities, Los Angeles County Chapter;

N. A police chief nominated by the Los Angeles County Police Chiefs Association;

O. A representative practicing in Los Angeles County nominated by the Southern California Public Health Association.

Data Advisory Committee Activity Summary 2017 through Present

Meeting Date	Met or Cancelled	Actions Taken or Agenda Items Requiring Vote
February 8, 2017	Met	None
April 12, 2017	Cancelled due to lack of agenda items	
June 14, 2017	Met	None
August 9, 2017	Cancelled due to lack of agenda items	
October 11, 2017	Cancelled due to lack of agenda items	
December 13, 2017	Met	Recommendation: Have Stryker present at EMS Commission to address plans to resolve re: data transmission issues for LAFD and LACoFD (Done at 1-17-2018 EMSC meeting)
February 14, 2018	Met	No Quorum. No outstanding items.
April 11, 2018	Cancelled due to lack of agenda items	
June 13, 2018	Cancelled due to lack of agenda items	
August 8, 2018	Cancelled due to lack of agenda items	
October 10, 2018	Cancelled due to lack of agenda items	
December 12, 2018	Cancelled due to lack of agenda items	
February 13, 2019	Cancelled due to lack of agenda items	
April 10, 2019	Cancelled due to lack of agenda items	
June 12, 2019	Met	None
August 14, 2019	Cancelled due to lack of agenda items	
October 9, 2019	Cancelled due to lack of agenda items	
December 11, 2019	Cancelled due to lack of agenda items	
February 12, 2020	Cancelled due to lack of agenda items	
April 8, 2020	Cancelled due to lack of agenda items	
June 10, 2020	Cancelled due to lack of agenda items	
August 12, 2020	Met	None
October 14, 2020	Cancelled due to lack of agenda items	
December 9, 2020	Cancelled due to lack of agenda items	
February 10, 2021	Cancelled due to lack of agenda items	
April 14, 2021	Met	None
June 9, 2021	Cancelled due to lack of agenda items	
August 11, 2021	Met	Recommendation: Determine process to change DAC to ad hoc

COUNTY OF LOS ANGELES
EMERGENCY MEDICAL SERVICES COMMISSION

10100 Pioneer Boulevard, Suite 200, Santa Fe Springs, CA 90670
(562) 378-1604 FAX (562) 941-5835
http://ems.dhs.lacounty.gov

September 15, 2021

TO: Supervisor Hilda L. Solis, Chair
Supervisor Holly J. Mitchell
Supervisor Sheila Kuehl
Supervisor Janice Hahn
Supervisor Kathryn Barger

FROM: Cathy Chidester
Executive Director

SUBJECT: **EMERGENCY MEDICAL SERVICES COMMISSION ANNUAL REPORT – FISCAL YEAR 2020-2021**

Attached is the Emergency Medical Services Commission's (EMSC) Annual Report to the Board of Supervisors for Fiscal Year 2020-2021. This report is being submitted in compliance with Los Angeles County Code Chapter 3.20, Section 3.20.070.5, to report its findings, conclusions, and recommendations to the Board of Supervisors at least every 12 months.

During this reporting period, the EMSC held its meetings on the third Wednesday of every odd month from 1:00 p.m. to 3:00 p.m. by Zoom Video Conferencing due to the March 4, 2020 California Executive Order (EO) proclaiming a State of Emergency, and subsequent EO N 25-20 issued on March 12, 2020 and EO N 29-20 issued on March 17, 2020 related to convening public meetings due to the coronavirus disease 2019 (COVID-19) pandemic. Commission meetings are usually held at the EMS Agency located at 10100 Pioneer Boulevard, 1st Floor Hearing Room, Santa Fe Springs, California 90670.

Should you have any questions, please feel free to contact me at (562) 378-1604 cchidester@dhs.lacounty.gov or Denise Watson, Commission Liaison, at (562) 378-1606 dwatson@dhs.lacounty.gov.

CC:DW

Attachment

c: Christina R. Ghaly, M.D., Director of Health Services
Hal F. Yee, Jr., M.D., Ph.D., Chief Deputy Director, Clinical Affairs, DHS
Ed Morrissey, County Counsel
Celia Zavala, Executive Officer, Board of Supervisors
Health Deputies, Board of Supervisors
EMS Commission

Los Angeles County
Emergency Medical Services Commission
Annual Report to the Board of Supervisors
Fiscal Year 2020–2021

Health Services
LOS ANGELES COUNTY

Los Angeles County
Department of Health Services
Emergency Medical Services Agency
10100 Pioneer Boulevard, Suite 200
Santa Fe Springs, CA 90670
Phone: (562) 378-1500 / Fax: (562) 941-5835
Website: http://ems.dhs.lacounty.gov

BOARD OF SUPERVISORS

MESSAGE FROM EXECUTIVE DIRECTOR CATHY CHIDESTER

The fiscal year 2020/2021 activities for the Emergency Medical Services (EMS) Agency and EMS Commission were driven by the COVID-19 pandemic response. The EMS Commission continued to hold meetings online rather than in person in compliance with health orders, the emergency declaration, and executive orders by Governor Gavin Newsom in March 2020. The EMS Commission held all the scheduled meetings and continued reviewing and recommending EMS Agency policies, monitoring the EMS system, understanding and addressing current EMS system and hospital issues. I am proud to recognize our Commission as always being engaged, proactive, and responsive to the issues and mission of the EMS community.

MESSAGE FROM CHAIRMAN PAUL S. RODRIGUEZ

The global COVID-19 pandemic severely impacted all communities throughout the country, and Los Angeles County was no exception. Through the constant coordination and dedication of Agency staff, County policies and protocols were reviewed, revised, and created as necessary to ensure the safe treatment of all County residents. While the COVID-19 response was the main driver this past year, the Agency continued to work on such critical issues as behavioral health policies, new medication administration options for field personnel, alternative patient destinations, and ambulance patient offloading concerns. On behalf of my fellow commissioners, we are proud to be a part of the EMS Agency's mission and humbled to serve with such a dedicated staff of EMS professionals who constantly strive to provide the highest quality of service our community deserves.

EMERGENCY MEDICAL SERVICES COMMISSION MEETINGS

EMS Commission meetings are public meetings governed by the Ralph M. Brown Act and are held on the third Wednesday of every odd month, beginning with January as month one. Meetings are held at the EMS Agency located at 10100 Pioneer Boulevard, First Floor Hearing Room, Santa Fe Springs, California 90670. Based on EO N25-20 and N29-20 signed by Governor Gavin Newsome in March of 2020 and the County's and Board of Supervisors requirement for no in-person meetings during the pandemic, the EMS Commission meetings were held by Zoom Video Conference Calls beginning in May 2020. As State and County restrictions for public meetings remain in place, the EMS Commission will continue with Zoom meetings until further directed by the Board of Supervisors.

Meetings in FY 2020-21

July 15, 2020 – Zoom	September 16, 2020 – Zoom	November 18, 2020 – Zoom
January 20, 2021 – Zoom	March 17, 2021 – Zoom	May 19, 2021 – Zoom

MISSION STATEMENT

To support and guide the Emergency Medical Services (EMS) Agency activities to ensure timely, compassionate, and quality emergency and disaster medical services. The Emergency Medical Services Commission's (EMSC) mission complements the County's mission through improving the quality of life for the people and community of Los Angeles County (LA County).

HISTORICAL BACKGROUND

The EMSC was established by the Board of Supervisors (Board) in October 1979. On April 7, 1981, the Board approved and adopted Ordinance No. 12332 of Title 3: Advisory Commissions and Committees, Los Angeles County Code Chapter 3.20, Emergency Medical Services Commission, to establish the Commission in accordance with California Health and Safety Code Division 2.5 Sections:

1797.270 – Emergency Medical Care Committee Formation
1797.272 – Emergency Medical Care Committee Membership
1797.274 – Emergency Medical Care Committee Duties
1797.276 – Emergency Medical Care Committee Annual Report

On January 29, 2008, the Board approved amending the subject Ordinance to revise the selection of the licensed paramedic representative, previously nominated by the California Rescue and Paramedic Association (CRPA), be made by the California State Firefighters' Association Emergency Medical Services Committee because CRPA ceased operations.

On November 1, 2011, in consultation with the Department of Health Services, the EMSC amended the Ordinance to add two commission seats. One member will be nominated by the Los Angeles County Police Chiefs' Association (LACPCA), and the second will be nominated by Southern California Public Health Association (SCPHA). These seats are beneficial to the EMSC and the County by allowing for expert input by law enforcement and public health. With this amendment, the addition of two commission seats increased the number of commissioners from 17 to 19.

MEMBERSHIP

The EMSC is currently comprised of 19 commissioners who are non-County employees acting in an advisory capacity to the Board of Supervisors and the Director of Health Services. They advise on matters related to emergency medical care and practices, EMS policies, programs, and standards, including paramedic services throughout the County of Los Angeles. There is an Executive Director and a Commission Liaison who are County employees and serve as staff on the Commission.

FUNCTIONS AND DUTIES

The EMSC performs the functions of the Emergency Medical Care Committee as defined in Sections 1750 et seq. of the Health and Safety Code and includes the following duties:

- Act in an advisory capacity to the Board of Supervisors and the Director of Health Services regarding County policies, programs, and standards for emergency medical care services throughout the County, including paramedic services
- Monitor studies of particular elements of the emergency medical care system as requested by the Board, the Director of DHS, or on its initiative; delineate problems and deficiencies and recommend appropriate solutions
- Acquire and analyze the information necessary for measuring the impact and the quality of emergency medical care services
- Report findings, conclusions, and recommendations to the Board at least every twelve months
- Review and comment on submitted plans and proposals for emergency medical care services

- Recommend, when the need arises, that LA County engages independent contractors for the performance of specialized, temporary, or occasional services to the EMSC, which members of the classified service cannot perform, and for which the LA County otherwise has the authority to contract
- Advise the Director on the policies, procedures, and standards that affect the certification/accreditation of mobile intensive care nurses and paramedics
- Advise the Director on proposals of any public or private organization to initiate or modify a program of paramedic services or training
- To arbitrate differences in the field of paramedic services and training between all sectors of the community, including, but not limited to, county agencies, municipalities, public safety agencies, community colleges, hospitals, private companies, and physicians
- To conduct public hearings as necessary

ANNUAL WORKPLAN

The EMS Commission's goals and objectives for the upcoming year support the County's mission, vision, and strategic priorities through continuing to make recommendations on policies that support the health of residents and visitors to Los Angeles County. The EMS Commissions' membership ensures input and understanding of the various organizations and communities served by the EMS system.

Goals and Objectives:

- Review and recommend policies and directives for adoption by the EMS Agency
- Provide input on proposed policies and suggested changes
- Review criteria for 9-1-1 Receiving Center Designation
- Review Los Angeles County Ordinance, Chapter 3.20: *Emergency Medical Services Commission* Section 3.20.040: Composition: to update the nominating entity of the member and any other member requirements such as working in Los Angeles County
- Advice on the impact of emergency medical care policies related to paramedic and EMT services and training
- Monitor State and Federal legislation affecting the EMS system
- Through the established committee process, advise and recommend topics for education
- Conduct public hearings, as required
- Continue moving forward and implement recommendations from the September 2016 Ad Hoc committee report on the *Prehospital Care of Mental Health and Substance Use Emergencies* through:
  - Development of protocols for management of agitated patients – pharmacologic and non-pharmacologic
  - Monitor, support, and make policy recommendations to standardize criteria for dispatching fire and law to behavioral health calls
  - Revise Prehospital Care Policy Reference No. 838: *Application of Restraints*
  - Ensure collaboration and awareness of Department of Mental Health and similar groups work to establish a system to triage mental health emergency calls and deploy the appropriate resources to these calls
- Continue to engage with law enforcement to support similar or overlapping response protocols, i.e., tactical EMS, use of Narcan in the field, and dispatch and triage of 9-1-1 behavioral calls
- Continue to monitor ambulance patient offload times (APOT) data and work with transportation providers, including ambulance companies and fire departments, and hospitals to reduce ambulance patient offload times and recommend best practices to address offload delays
- Support the EMS Agency's efforts to ensure timely and accurate data submission from all EMS providers and specialty care centers
- Participate as a voting member on the Measure B Advisory Board and ensure constituent groups are aware of the Measure B allocation process
- Maintain awareness of the EMS Agency's COVID-19 response activities related to supporting the hospitals and EMS providers and data collection/analysis

ONGOING LONG-TERM PROJECTS

- *Prehospital Care of Mental Health and Substance Abuse Emergencies*: Continue to address the recommendations made in the EMSC ad hoc committee's report of September 2016, and implement as addressed, including evaluating and understanding the interaction between law enforcement and EMS providers in response to patients with behavioral health emergencies
- Monitor legislation of interest to emergency medical services
- Support education efforts for Bystander, Hands-Only CPR training (Sidewalk CPR)
- Support the EMS Agency in efforts to ensure that individuals seen and assessed within the 9-1-1 system are transported to the appropriate destination that is best suited to meet their needs, i.e., sobering centers, emergency departments, and psychiatric urgent care centers
- Monitor and support 9-1-1 ambulance transport readiness through supporting the APOT Ad Hoc Committee's recommendations to decrease ambulance patient offload times
- Monitor and support EMS pilot and trial studies to improve the delivery of emergency medical care and transportation
- Monitor the progress of the State EMS Authority on drafting changes to Chapter 13
- Monitor the Medical Advisory Committee workgroup revisions to Prehospital Care Policy Reference No. 834: *Patient Refusal of Treatment/Transport and Treat and Release at Scene* to ensure quality and safe patient care

ACCOMPLISHMENTS AND SIGNIFICANT OUTCOMES FISCAL YEAR 2020-21

- Approved the FY 2019-20 EMSC Annual Report at the November 20, 2020 meeting
- Recommended and supported EMS Agency's application for the local optional scope to allow paramedics and EMTs administering influenza vaccine as well as COVID-19 vaccine, upon availability
- Recommended establishment of an ad hoc workgroup to advance the September 2016 *Prehospital Care of Mental Health and Substance Abuse Emergencies* Report recommendations, specifically Recommendation Eight
- Voted in Commissioner for EMSC Measure B Advisory Board Representation
- Conducted the required public hearing on the closure of Olympia Medical Center
- Approved the Impact Report on the closure of Olympia Medical Center and recommended submission to the Board of Supervisors
- Approved nominating committee and standing committee selections
- Recommended approval of Prehospital Care Policy Reference Numbers:
  - 218: Trauma Hospital Advisory Committee (THAC)
  - 222: Downgrade or Closure of 9-1-1 Receiving Hospital or Emergency Medical Services
  - 228: ReddiNet® Utilization
  - 316: Emergency Department Approved for Pediatric (EDAP) Standards
  - 322: Stroke Receiving Center Standards
  - 322.1: Stroke Performance Measures
  - 326: Psychiatric Urgent Care Center (PUCC) Standards
  - 328: Sobering Center (SC) Standards
  - 508: Sexual Assault Patient Destination
  - 510: Pediatric Patient Destination
  - 511: Perinatal Patient Destination
  - 516: Cardiac Arrest (Non-Traumatic) Patient Destination
  - 518: Decompression Emergencies/Patient Destination
  - 526: Behavioral / Psychiatric Crisis Patient Destination
  - 526.1: Medical Clearance Criteria Screening Tool for Psychiatric Urgent Care Center (PUCC)
  - 528: Intoxicated (Alcohol) Patient Destination
  - 528.1: Medical Clearance Criteria Screening Tool for Sobering Center (SC)
  - 606: Documentation of Prehospital Care

- 618: EMS Quality Improvement Committees
- 644: Base Hospital Documentation Manual (Information Only)
- 804: Fireline Emergency Medical Technician-Paramedic (FEMP)
- 814: Determination / Pronouncement of Death in the Field
- 815: Honoring Pre-Hospital Do Not Resuscitate Orders, Physician Orders for Life Sustaining Treatment and End of Life Option (Aid-in-Dying Drug)
- 830: EMS Pilot and Scientific Studies
- 834: Patient Refusal of Treatment/Transport and Treat and Release at Scene
- 1013: EMS Continuing Education (CE) Provider Approval and Program Requirements
- 1102: Disaster Resource Center (DRC) Designation and Mobilization
- 1102.2: DRC Equipment Checklist List Items Deployed to Other Facilities
- 1104: Disaster Pharmaceutical Cashes Carried by Authorized ALS Providers
- 1106: Mobilization for Local Pharmaceutical Cashes (LPCs)
- 1106.1: LPC Inventory and Checklist for Items Deployed
- 1106.2: LPC Photograph
- 1107.1: M/SS Cache Inventory and Checklist for Items Deployed
- 1108.1: CHEMPACK Inventory List
- 1108.2: CHEMPACK Photograph
- 1122: Bed Availability Reporting
- 1122.1: Bed Availability Report
- 1128: Decontamination Trailer Deployment for Mass Casualty Event
- 1132: Amateur Radio Communications
- 1138.1: Burn Resource Center Required Equipment/Supplies/Pharmaceuticals
- 1138.2: Local Burn Lead Specialist Call Panel
- 1138.3: Remote Burn Lead Specialist
- 1140: Mobile Medical System Deployment
- 1140.1: Mobile Medical System Deployment Summary

EMERGENCY MEDICAL SERVICES COMMISSIONERS


Captain Brian Bixler
Peace Officers Association


Diego Caivano, MD
Los Angeles County Medical Association


Erick H. Cheung, MD, Ph.D.
Southern California Psychiatric Society


Chief Eugene Harris
Los Angeles County Police Chiefs' Association


John C. Hisserich, DrPH
Public Member
Third Supervisorial District


Lydia Lam, MD
American College of Surgeons


James Lott, PsyD
Public Member
Second Supervisorial District


Carol Meyer, RN
Public Member
Fourth Supervisorial District

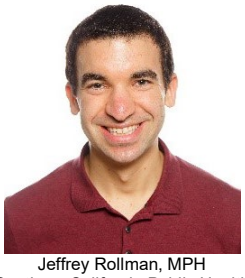

Ms. Gloria Molleda
League of California Cities
Los Angeles County Division


Garry Olney, DNP
Hospital Association of Southern California


Robert Ower, RN
Los Angeles County Ambulance Association

Chief Kenneth Powell
Los Angeles Area Fire Chiefs' Association


Chairman Paul S. Rodriguez
California State Firefighters' Association


Jeffrey Rollman, MPH
Southern California Public Health Association


Vice-Chair Joseph Salas
Public Member
First Supervisorial District


Nerses Sanossian, MD, FAHA
American Heart Association
Western States Affiliate


Carole A. Snyder, RN
Emergency Nurses Association


Atilla Uner, MD, MPH
California Chapter – American College of Emergency Physicians (CAL-ACEP)


Mr. Gary Washburn
Public Member
Fifth Supervisorial District


Cathy Chidester, RN, MSN
Executive Director
EMSC Staff


Denise Watson, BSB
Commission Liaison
EMSC Staff

EMERGENCY MEDICAL SERVICES AGENCY
LOS ANGELES COUNTY

10100 Pioneer Boulevard, Suite 200
Santa Fe Springs, CA 90670

Tel: (562) 378-1500
Fax: (562) 941-5835

"To advance the health of our communities by ensuring quality emergency and disaster medical services."

July 14, 2021

Police Chief Michael Ishii
Hawthorne Police Department
12501 Hawthorne Boulevard
Hawthorne CA 90250

Dear Chief Ishii:

OFFICER COMMENDATIONS

The Emergency Medical Services (EMS) Agency would like to congratulate officers Bearet Luttenbacher, Samantha Naghaway, and John Yoshida on the recognition award from the California Emergency Medical Services Authority (EMSA).

The officers were recognized during the 2020 California EMS Services Award Ceremony on July 1, 2021 and received the EMSA Inter-Service EMS Service Recognition for their quick actions/treatment provided to a gunshot victim.

The officers responded to a scene of shots fired and found a female victim that sustained a gunshot wound to her left thigh and was hemorrhaging from the wound. The officers applied a tourniquet to her left upper thigh, controlling the hemorrhaging and was transported to a local trauma center where she underwent surgical intervention to repair her femoral artery.

There are many instances where law enforcement is first on scene of a medical or traumatic injury where officers are ready and capable of rendering initial (in many cases life saving) care to the victim(s).

This is reflective of Hawthorne Police Department's commitment to first responder education and the community. It also exemplifies the teamwork and close bond there is in our communities between EMS and law enforcement in providing Prehospital life-sustaining care.

Sincerely,

Cathy Chidester
Director

CC:jt
07-09

c. Officer Bearet Luttenbacher, Hawthorne Police Department
Officer Samantha Naghaway, Hawthorne Police Department
Officer John Yoshida, Hawthorne Police Department

EMERGENCY MEDICAL SERVICES AGENCY
LOS ANGELES COUNTY

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"To advance the health of our communities by ensuring quality emergency and disaster medical services."

July 30, 2021

Bryan Webb, Dispatch Center Manager
Los Angeles County Fire Dispatch
1320 N Eastern Avenue
Los Angeles, CA. 90063

CERTIFIED

IMPLEMENTATION OF SYSTEMWIDE DISPATCH CENTER ANNUAL PROGRAM REVIEWS

This letter is to notify you that the Emergency Medical Services (EMS) Agency will begin systemwide implementation of annual program reviews of dispatch centers responsible for public provider 9-1-1 emergency medical dispatch beginning September 2021.

In order to be consistent with the California Health & Safety Code § 1797.220 and the Emergency Medical Services Authority, Dispatch Program Guidelines, the EMS Agency collaborated with 9-1-1 dispatch centers to develop Reference No. 227, Dispatching of Emergency Medical Services and Reference No. 227.1, Dispatch Pre-Arrival Instructions.

Attached are program monitoring tools that were developed based on Reference Nos. 227, 227.1, and 620, EMS Quality Improvement Program. The EMS Agency staff will work with your dispatch coordinator to establish a mutually agreed upon date and time for Los Angeles County Fire's site visit.

Program reviews are designed to verify compliance with Reference. Nos. 227, 227.1, and 620 and will include at minimum, the following:

- Review of policies/procedures, which must be available during the program review and upon request from the EMS Agency
- Dispatcher/Call-Taker employee file review to confirm compliance with applicable required certifications and/or continuing education requirements
- Review of the Quality Improvement Program

Please contact me at (562) 378-1600 or Greg Klein at (562) 378-1685 for any question or concerns.

Sincerely,

Marianne Gausche-Hill, MD
Medical Director

MGH:JT:SM:gk
07-17

c. √Director, EMS Agency
Dr Clayton Kazan, Dispatch Center Medical Director
Assistant Chief Tony Ramirez
Fire Chief Daryl Osby

EMERGENCY MEDICAL SERVICES AGENCY
LOS ANGELES COUNTY

10100 Pioneer Blvd, Suite 200
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To ensure timely, compassionate, and quality emergency and disaster medical services.

August 22, 2021

Stephen Albrecht
Regional Administrator
Star Behavioral Health Urgent Care Center
3210 Long Beach Blvd.
Long Beach, CA 90807

CERTIFIED

Dear Mr. Albrecht:

PSYCHIATRIC URGENT CARE CENTER DESIGNATION (LANCASTER)

This is to report that Star Behavior Health Urgent Care Center (SBH-LA), Lancaster, has successfully completed its site visit conducted by the Emergency Medical Services (EMS) Agency on July 28, 2021 for designation as a Psychiatric Urgent Care Center (PUCC). The EMS Agency has determined SBH-LA meets the requirements of Reference No. 326, Psychiatric Urgent Care Center (PUCC).

Effective August 17, 2021, SBH-LA is a designated PUCC. This approval is valid indefinitely, unless terminated by the EMS Agency or voluntarily withdrawn by SBH-LA.

SBH-LA may start receiving patients transported via 9-1-1 who meet the patient inclusion criteria as outlined in Ref.No.526, Behavioral/Psychiatric Crisis Patient Destination.

As a reminder, participation in this program requires SBH-LA submit/report data to the EMS Agency in accordance to Reference No. 326. This report is due to the EMS Agency 30 days after the end of each quarter; therefore, SBH-LB's first data submission must be received by October 31, 2021.

Thank you for any commitment to the Los Angeles County EMS System and your voluntary participation in this new program.

LOS ANGELES COUNTY

EMERGENCY MEDICAL SERVICES AGENCY

Transports to Sobering Center (SC) and Psychiatric Urgent Care Centers (PUCC)

SC*	9/1	10/1	11/1	12/1	1/1	2/1	3/1	4/1	5/1	6/1	7/1	9/1	9/20	10/1	11/1	12/1	1/1	2/1	3/1	4/1	6/21	7/21
Sobering Unit	126	128	100	99	95	94	104	43	-	-	-	-	-	-	-	-	-	-	-	-	96	7
CP	1	6	1	5	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AP	2	2	3	4	4	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	129	136	104	108	99	101	104	44	-	-	-	-	-	-	-	-	-	-	-	-	96	7

PUCC**	9/1	10/1	11/1	12/1	1/1	2/1	3/1	4/1	5/1	6/1	7/1	8/1	9/1	10/1	11/1	12/1	1/1	2/1	3/1	4/1	6/21	7/21
CP	9	9	3	3	10	7	12	7	-	9	3	4	4	2	2	-	3	-	2	2	4	-
AP	2	11	4	4	8	6	5	6	-	9	11	6	5	11	3	16	3	8	6	2	-	3
TAD									2			12	7	4	7	14	15	10	7	8	3	3
Total	11	20	7	7	18	13	17	13	2	18	14	22	16	17	12	30	21	18	15	12	7	6

*Sobering Center closed April 2020 - April 2021 for COVID overflow

**Star Facilities are not included in this report. Will be included when data is available.

CP = LAFD Community Paramedicine Unit

AP = Advanced Practice Unit both LAFD & LACoFD

TAD = LACoFD hybrid program with telemedicine

EMERGENCY MEDICAL SERVICES AGENCY
LOS ANGELES COUNTY

Los Angeles County
Board of Supervisors

Hilda L. Solis
First District

Holly J. Mitchell
Second District

Sheila Kuehl
Third District

Janice Hahn
Fourth District

Kathryn Barger
Fifth District

Cathy Chidester
Director

Marianne Gausche-Hill, MD
Medical Director

10100 Pioneer Boulevard, Suite 200
Santa Fe Springs, CA 90670

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"To advance the health of our communities by ensuring quality emergency and disaster medical services."

August 24, 2021

MEMORANDUM

TO: **EMS Provider Agencies - Fire Chiefs, Medical Directors, Paramedic Coordinators, EMS Educators, Licensed Ambulance Operators**

FROM: **Marianne Gausche-Hill, MD**

SUBJECT: **Notification of Fatal or Non-Fatal Submersion Incidents by EMS to Public Health**

As a part of Los Angeles County's efforts to prevent drownings at public pools, the Board of Supervisors passed a motion on June 8, 2021, that directs Fire and Emergency Medical Services (EMS) to immediately notify the Los Angeles Department of Public Health (LA-DPH) of any submersion incidents involving pools and spas.

The Los Angeles County EMS Agency will be initiating training for all 9-1-1 EMS Provider Agencies to notify LA-DPH of all submersion incidents fatal or not, that occur in any swimming pool or spa. Training will occur in September 2021.

Effective October 1st all submersion incidents in pools or spas shall be reported to LA-DPH Duty Officer at 213-989-7140 immediately after transfer of care to emergency department staff or termination of resuscitation in the field.

LA-DPH will request the following information:

- Location Address / Location Name (if applicable)
- Type of public pool (municipal, public, school, apartment, etc.)
- Summary of incident (age and victim status)
- Was there a contamination (e.g., visible blood, vomit, or other bodily fluids in the pool water)?
- Was the pool still in use following the incident?

Thanks so much for your cooperation in ensuring the ongoing safety of the public.

Attachments:
Notification from LA-DPH
Treatment Protocols - Ref. No.1225 and 1225-P Submersion, Ref. No. 1210 and 1210-P Cardiac Arrest

c: Base Hospital Medical Directors, Prehospital Care Coordinators, ED Medical Directors, ED Administrative Directors

IMMEDIATE NOTIFICATION OF FATAL OR NONFATAL DROWNINGS

Purpose: To assist the Department of Public Health (DPH) in promptly investigating fatal or nonfatal drownings at public pools in order to ensure safety and water treatment can verified before reopening the public pool.

Background: DPH is responsible for ensuring that public swimming pools are operated and maintained in a safe and sanitary manner. When drownings occur at public pools, DPH will investigate to see if all required safety equipment and enclosures were present. DPH will also ensure that the pool is closed until required cleaning and disinfecting is performed as indicated by an onsite evaluation.

As part of the County's efforts to prevent drownings at pools, the Board of Supervisors passed a motion on June 8, 2021 that directs Fire and Emergency Medical Services (EMS) to immediately notify DPH of any drowning incidents.

WHAT: DPH is requesting notification for all submersion incidents (fatal or not). Notify pool operator that pool is to remain closed until DPH performs an onsite visit.

WHERE: At any public swimming pool or spa located Countywide (including unincorporated and incorporated areas). Public swimming pools/spas include: Municipal (city parks), Public (YMCA, gym, hotel, spa, water park), and Apartments (including condominiums).

WHEN: Once EMS has transported the victim to the hospital or related facility, or resuscitation is discontinued.

HOW: Call the **DPH Duty Officer** at **213-989-7140**
(This number is only to be used by First Responders/Health Care Providers/Government Agencies and not to be shared with the public)

The Duty Officer will ask for the following information:

- Location Address
- Location Name (if applicable)
- Type of Public Pool (municipal, public, school, apartment, etc.)
- Summary of incident – What happened? How did it occur?
- Age of victim
- Victim status – Alive, responsive, …
- Was there visible blood, vomit, or other bodily fluid in the pool water?
- Was the pool still in use following the incident?

Treatment Protocol: CARDIAC ARREST **Ref. No. 1210**

Base Hospital Contact: Required prior to transport for all cardiac arrest patients who do not meet criteria for determination of death per *Ref. 814*.

1. For patients meeting *Ref. 814* Section I criteria for determination of death in the field – document Provider Impression as *DOA – Obvious Death*

2. Resuscitate cardiac arrest patients on scene ❶

3. Initiate chest compressions at a rate of 100-120 per min, depth 2 inches or 5 cm ❷
   Minimize interruptions in chest compressions

4. Assess airway and initiate basic and/or advanced airway maneuvers prn ❸❹ *(MCG 1302)*
   King LT is the preferred advanced airway ❺
   Monitor waveform capnography throughout resuscitation ❻

5. Administer high-flow **Oxygen** (15L/min) *(MCG 1302)*

6. Initiate cardiac monitoring *(MCG 1308)*
   Briefly assess rhythm every 2 minutes, minimizing pauses, or continuously via rhythm display technology ❼

V-FIB/PULSELESS V-TACH: ❽

7. **Defibrillate biphasic at 200J** immediately or per manufacturer's instructions
   Repeat at each 2-minute cycle as indicated

8. Establish vascular access *(MCG 1375)*
   Establish IO if any delay in obtaining IV access

9. Begin **Epinephrine** after defibrillation x2:
   Epinephrine (0.1mg/mL) administer 1mg (10mL) IV/IO
   Repeat every 5 min x2 additional doses; maximum total dose 3mg ❾

   CONTACT BASE to discuss additional epinephrine doses in cases where it may be indicated due to recurrent arrest or conversion to PEA

10. After defibrillation x3 (for refractory or recurrent V-Fib/V-Tach without pulses):
    Amiodarone 300mg (6mL) IV/IO
    Repeat **Amiodarone 150mg (3mL) IV/IO** x1 prn after additional defibrillation x2, maximum total dose 450mg

ASYSTOLE/PEA:

11. **Epinephrine (0.1mg/mL) administer 1mg (10mL) IV/IO**
    Repeat every 5 min x2; administer first dose as early as possible; maximum total dose 3mg ❾

    CONTACT BASE to discuss additional epinephrine doses in cases where it may be indicated due to refractory PEA or recurrent arrest

12. Consider and treat potential causes ❿

13. **Normal Saline 1L IV/IO rapid infusion**
    Repeat x1 for persistent cardiac arrest
    For suspected hypovolemia, administer both liters simultaneously

14. For patients with renal failure or other suspected hyperkalemia: ⓫
    Calcium Chloride 1gm (10mL) IV/IO
    Sodium Bicarbonate 50mEq (50mL) IV/IO

TERMINATION OF RESUSCITATION:

15. If resuscitative efforts are unsuccessful and the patient does not meet ALL criteria for Termination of Resuscitation in *Ref. 814, Section II.A.*, **CONTACT BASE** to consult with Base Physician ❽

RETURN OF SPONTANEOUS CIRCULATION (ROSC): ⓬⓭

16. Initiate post-resuscitation care immediately to stabilize the patient prior to transport ⓮
17. Establish advanced airway prn ❺
18. Raise head of stretcher to 30 degrees if blood pressure allows, otherwise maintain supine
19. Continue low volume ventilations at 10 per minute ⓯
20. Immediately resume CPR if patient re-arrests
21. For SBP < 90 mmHg:
    Normal Saline 1L IV/IO rapid infusion

    If no response after **Normal Saline 250mL,** or worsening hypotension and/or bradycardia:

    Push-dose Epinephrine – mix 9mL Normal Saline with 1mL Epinephrine 0.1mg/mL (IV formulation) in a 10mL syringe. Administer **Push-dose Epinephrine (0.01mg/mL) 1mL IV/IO** every 1-5 minutes as needed to maintain SBP > 90mmHg ⓱
    CONTACT BASE concurrent with initial dose of **Push-dose Epinephrine**
22. Perform 12-lead ECG and transmit to the SRC ⓰

23. Check blood glucose
    For blood glucose < 60mg/dL
    Dextrose 10% 125mL IV and reassess
    If glucose remains < 60mg/dL, repeat 125 mL for a total of 250 mL

24. For suspected narcotic overdose: ⓲
    Naloxone 2-4mg (2-4mL) IV/IO/IM/IN (For IN, 1mg per nostril or 4mg/0.1mL IN if formulation available)
    Maximum dose all routes 8 mg

25. Contact **Public Health 213-989-7140** for all submersion incidents involving pools or spas after transfer of patient care in the emergency department or upon termination of field resuscitation in the field (this requirement is effective 10/1/21). ⓳

SPECIAL CONSIDERATIONS

❶ Maintaining perfusion with high-quality CPR throughout resuscitation is essential to ensuring good patient outcome. Transporting the patient in cardiac arrest causes interruptions in CPR and reduces CPR quality. Patients who are resuscitated until ROSC on scene have higher neurologically intact survival.

❷ Chest compressions are the most important aspect of cardiac arrest resuscitation. Maintaining continuous chest compressions should take priority over any medication administration or transport.

❸ Hyperventilation reduces venous return and worsens patient outcomes. Both continuous and interrupted (30:2) compressions/ventilations are acceptable. Regardless of ventilation method used, ventilations should be no more frequent than 10 per minute with a volume approximately 1/3 of the bag, just enough to see chest rise.

❹ Bag-mask ventilation (BMV) with a viral filter is the preferred method of airway management. BMV in cardiac arrest has been associated with improved patient outcomes and advanced airway placement should be deferred until after return of spontaneous circulation (ROSC) unless BMV is inadequate. If a decision is made to transport the patient in refractory cardiac arrest and inability to maintain effective ventilations with BMV is anticipated, consider advanced airway prior to transport.

❺ King LT is the preferred advanced airway unless specifically contraindicated. Paramedics should use judgment based on patient characteristics, circumstances, and skill level when selecting the advanced airway modality.

❻ $ETCO_2$ should be > 10 with a “box-shaped” waveform during effective CPR. A flat or wavy waveform or $ETCO_2$ < 10 may indicate ineffective compressions or airway obstruction. A sudden increase in $ETCO_2$ is suggestive of ROSC. The waveform can also be used to confirm ventilation rate if an advanced airway or asynchronous ventilation with continuous compressions is used.

❼ If you are able to observe the underlying rhythm during compressions via rhythm display technology, do not pause for the rhythm check. In order to minimize pauses in chest compressions, pulse checks should only be performed during rhythm checks when there is an organized rhythm with signs of ROSC, such as normal capnography or sudden rise in capnography.

❽ Patients in persistent cardiac arrest with refractory V-Fib (persistent V-Fib after 3 unsuccessful shocks) or EMS-witnessed arrest of presumed cardiac etiology may have a good outcome despite prolonged resuscitation. For these patients, resuscitation may be continued on scene for up to 40 minutes, as long as resources allow, in order to maximize the chances for field ROSC, which is strongly associated with improved survival with good neurologic outcome. Earlier transport may be initiated for providers using a mechanical compression device who are transporting a patient to a STEMI Receiving Center (SRC) for extracorporeal membrane oxygenation (ECMO) initiation.

❾ Epinephrine may improve outcomes if given early in non-shockable rhythms, but can worsen outcomes early in shockable rhythms, where defibrillation is the preferred initial treatment. Epinephrine is most likely to be effective if it is given early and after chest compressions have begun. The likelihood of meaningful survival declines after three (3) doses of epinephrine. Resuscitation should continue focused on quality CPR, defibrillation, and identifying reversible causes. Additional doses of epinephrine should only be administered with Base order.

⑩ Potential causes that can be treated in the field include hypoxia, hypovolemia, hyperkalemia, hypothermia, toxins, and tension pneumothorax. Hypoglycemia is a very rare cause of cardiac arrest and should not be assessed until after ROSC. If environmental hypothermia is suspected, resuscitation efforts should not be abandoned until the patient is re-warmed, or after consultation with the Base Physician.

⑪ Treat suspected hyperkalemia with calcium and sodium bicarbonate as soon as possible. The sooner it is administered, the more likely it is to be effective. Flush the line between medication administration.

⑫ Post cardiac arrest patients are at high risk for re-arrest during transport. Fluid resuscitation, vasopressor support, and avoidance of hyperventilation are recommended to decrease the risk of re-arrest.

⑬ All cardiac arrest patients, with or without ROSC, shall be transported to the most accessible open SRC if ground transport is 30 minutes or less, as initiation of targeted temperature management and early coronary angiography in a specialty center have been shown to improve outcomes.

⑭ Approximately 60% of patients will re-arrest shortly after ROSC. Anticipate this decline as the epinephrine administered during the resuscitation begins to lose effect. Initiating post-resuscitation care, including fluids and preparing push-dose epinephrine for use as needed, can prevent re-arrest. These steps should be initiated immediately after ROSC to stabilize the patient for approximately 5 minutes prior to transport to reduce chances of re-arrest en route.

⑮ $ETCO_2$ can help guide your ventilation rate; target $ETCO_2$ 35-45 mmHg. Just after ROSC, the $ETCO_2$ may be transiently elevated. This will decrease appropriately with ventilation and does not require hyperventilation to normalize. Persistently elevated $ETCO_2$ and/or “sharkfin” waveform may indicate respiratory failure as cause of the cardiac arrest. Falsely low $ETCO_2$ measurements can occur if there is a leak with BMV or shock.

⑯ An ECG with STEMI after ROSC requires notification of ECG findings to the SRC.

⑰ **Push-dose Epinephrine** is appropriate for non-traumatic shock including cardiogenic shock. Additional doses beyond 10mL may need to be prepared for prolonged transports.

⑱ Narcotic overdose should be suspected in cases where there is drug paraphernalia on scene or there is a witness report. Pinpoint pupils may be present, but hypoxia during cardiac arrest can cause mydriasis (dilated pupils) instead.

⑲ EMS is assisting the Department of Public Health (DPH) in promptly investigating fatal or nonfatal drownings at public pools or spas in order to ensure safety can be verified before reopening. Contacting the on-call DPH officer will allow timely investigation of these incidents and prevent future incidents.

Treatment Protocol: CARDIAC ARREST **Ref. No. 1210-P**

Base Hospital Contact Required.

1. For patients meeting *Ref. 814* Section I criteria for determination of death in the field – document *DOA – Obvious Death* ❶
2. Resuscitate cardiac arrest patients on scene ❷
3. Assess airway and initiate basic airway maneuvers *(MCG 1302)*
4. Assist respirations with bag-mask-ventilations (BMV) with viral filter, using **high-flow Oxygen 15L/min**; squeeze bag just until chest rise and then release - state "squeeze, release, release" to avoid hyperventilation ❸
5. For suspected foreign body (no chest rise with BMV): ❹
   Perform direct laryngoscopy and use pediatric Magill forceps to remove visible obstruction(s)
6. Initiate chest compressions at a rate of 100-120 compressions per minute with a compression to ventilation rate of 15:2 ❺❻
7. Initiate cardiac monitoring *(MCG 1308)*
   Briefly assess rhythm every 2 minutes, minimizing pauses, or continuously via rhythm display technology ❼❽
8. Establish vascular access *(MCG 1375)* ❾
9. **CONTACT BASE** concurrent with ongoing management

ASYSTOLE/PEA

10. **Epinephrine (0.1mg/mL) 0.01mg/kg IV/IO**, dose per *MCG 1309*
    May repeat every 5 min x2, maximum single dose 1mg ❿

    CONTACT BASE for additional epinephrine doses
11. Consider and treat potential causes ⓫
12. **Normal Saline 20mL/kg IV/IO** per *MCG 1309*
    May repeat x2

V-FIB/PULSELESS V-TACH

13. **Defibrillate at 2J/kg**, dose per *MCG 1309*
    Repeat at **4J/kg** at each 2-minute cycle as indicated
14. **Epinephrine (0.1mg/mL) 0.01mg/kg IV/IO**, dose per *MCG 1309*
    Begin after second defibrillation
    May repeat every 5 min x2, maximum single dose 1mg ❿

CONTACT BASE for additional epinephrine doses

15. For persistent or recurrent V-Fib/V-Tach without pulses:
Amiodarone (50mg/mL) 5 mg/kg IV/IO, dose per *MCG 1309*

RETURN OF SPONTANEOUS CIRCULATION ⓬⓭

16. Initiate post-resuscitation care on scene to stabilize the patient prior to transport ⓮
17. Establish advanced airway prn ⓯
18. Raise head of stretcher to 30 degrees if blood pressure allows, otherwise maintain supine
19. Continue ventilation at 20 breaths per minute or every 2-3 seconds
20. For SBP < 70mmHg:
Normal Saline 20mL/kg IV/IO rapid infusion per *MCG 1309*
Repeat x1 for persistent poor perfusion

    If no response after **Normal Saline 20mL/kg,** or worsening hypotension and/or bradycardia:
Push-dose Epinephrine – mix 9mL Normal Saline with 1mL Epinephrine (0.1mg/mL) IV formulation in a 10mL syringe; administer **Push-dose Epinephrine (0.01mg/mL)** per *MCG 1309* every 1-5 minutes as needed to maintain SBP > 70mmHg ⓰
21. Check blood glucose ⓱
For blood glucose < 60mg/dL
Dextrose 10% 5mL/kg IV/IO per *MCG 1309*
22. For suspected narcotic overdose: ⓲
Naloxone (1mg/mL) 0.1mg/kg IM/IN/IO/IV, dose per *MCG 1309*
23. Contact **Public Health 213-989-7140** for all submersion incidents involving pools or spas after transfer of patient care in the emergency department or upon termination of resuscitation in the field (this requirement is effective 10/1/21). ⓳

SPECIAL CONSIDERATIONS

❶ EMS Personnel are mandated reporters of child abuse and neglect, and a report should be made when suspected as per *Ref. 822*. Communicate suspicion for child abuse and/or neglect to accepting ED staff when home suggests children could be at risk for harm (e.g., unkept home, evidence of drug or alcohol abuse, unsafe living conditions, known or suspected domestic violence), when the history does not match with the severity of physical findings (e.g., child posturing after a roll off the couch), when patterned injury or burns or noted (e.g., circular burns as from a cigarette, whip marks on the skin, burns of both hands or feet), or when child reports physical or sexual abuse. Children < 3 years of age and those with developmental delay are at increased risk of abuse. This must also be accompanied by notification to the Department of Children and Family Services (DCFS).

❷ Maintaining perfusion with high-quality CPR throughout resuscitation is essential to ensuring good patient outcome. Transporting the patient in cardiac arrest causes interruptions in CPR and reduces CPR quality. Similar to adults in OHCA, pediatric patients who are resuscitated on scene have higher neurologically intact survival. Transport may be initiated sooner if scene safety concerns.

❸ EMS personnel should remain on scene up to 20 minutes to establish chest compressions, vascular access and epinephrine administration for nonshockable rhythms or until return of spontaneous circulation (ROSC) is achieved; for shockable rhythms, remain on scene until 3 defibrillations or until ROSC is achieved. The best results occur when resuscitation is initiated and maintained on scene, and post ROSC care is initiated.

❹ Bag-mask ventilation (BMV) with a viral filter is the preferred method of airway management. BMV in cardiac arrest has been associated with improved patient outcomes and advanced airway placement should be deferred until after ROSC unless BMV is inadequate. Children < 3 years of age are at high risk for foreign body aspiration. Foreign body aspiration should be suspected if there is a history of possible aspiration or when there is no chest rise with BMV after repositioning of the airway.

❺ Chest compressions are the most important aspect of cardiac arrest resuscitation. Maintaining chest compressions should take priority over any medication administration or transport.

❻ Hyperventilation reduces venous return and worsens patient outcomes. Both continuous and interrupted (15:2) compressions/ventilations are acceptable. Regardless of ventilation method used, ventilations should be no more frequent than 10 per minute with a volume just enough to see chest rise and then release the bag to allow for exhalation (“squeeze, release, release”). Once ROSC is achieved ventilation rates can increase to 20 per minute.

❼ If you are able to observe the underlying rhythm during compressions via rhythm display technology, do not pause for the rhythm check.

❽ $ETCO_2$ should be > 10 with a “box-shaped” waveform during effective CPR. A flat or wavy waveform or $ETCO_2$ < 10 may indicate ineffective compressions or airway obstruction. A sudden increase in $ETCO_2$ is suggestive of ROSC. The waveform can also be used to confirm ventilation rate if an advanced airway or asynchronous ventilation with continuous compressions is used.

❾ Peripheral venous access may be difficult to obtain in infants and small children. Consider IO placement as primary vascular access in patients for whom venous access is unlikely to be achieved

rapidly. For older children, make two attempts at venous access and, if unsuccessful, place and IO for vascular access.

⑩ Epinephrine may improve outcomes if given *early* in nonshockable rhythms and should be given within 5 minutes of the resuscitation. For shockable rhythms, where defibrillation is the preferred initial treatment, epinephrine should be given after the second defibrillation. Epinephrine is most likely to be effective if it is given early and after chest compressions have begun. The likelihood of meaningful survival declines after three (3) doses of epinephrine. Resuscitation should continue focused on quality CPR, defibrillation, and identifying reversible causes. Additional doses of epinephrine should only be administered with Base order if indicated, based on the individual patient.

⑪ Potential causes that can be treated in the field include hypoxia, hypovolemia, hyperkalemia, hypothermia, toxins, and tension pneumothorax. Hypoxia and Hypovolemia are common causes of PEA arrest in children. Hypoglycemia is a very rare cause of cardiac arrest and should not be assessed until after ROSC.

⑫ Post cardiac arrest patients are at high risk for re-arrest during transport. Fluid resuscitation, vasopressor support, and avoidance of hyperventilation are recommended to decrease the risk of re-arrest.

⑬ $ETCO_2$ can help guide your ventilation rate; target $ETCO_2$ 35-45 mmHg. Just after ROSC, the $ETCO_2$ may be transiently elevated. This will decrease appropriately with ventilation and does not require hyperventilation to normalize. Persistently elevated $ETCO_2$ and/or “sharkfin” waveform may indicate respiratory failure as cause of the cardiac arrest. Falsely low $ETCO_2$ measurements can occur if there is a leak with BMV or shock.

⑭ Re-arrest shortly after ROSC is common. Anticipate this decline as the epinephrine administered during the resuscitation begins to lose effect. Consider initiating post-resuscitation care prior to transport, if the scene allows, in order to reduce chances of re-arrest en route. Considerations include suspected cause of arrest and anticipated transport time to a Pediatric Medical Center. Pediatric patients with ROSC should be transported to a Pediatric Medical Center if within 30 minutes.

⑮ In the ROSC patient, BMV is preferred method for ventilation; in a patient longer than the length-based resuscitation tape (e.g., Broselow tape) or > 40 kg body weight King LT is the preferred advanced airway unless specifically contraindicated. Paramedics should use judgment based on patient characteristics, circumstances, and skill level when selecting the advanced airway modality.

⑯ **Push-dose Epinephrine** is appropriate for non-traumatic shock including cardiogenic shock. Additional doses beyond 10mL may need to be prepared for prolonged transports. For patients < 10kg, transfer the diluted **Push-dose Epinephrine** to a smaller (1mL or 3mL) syringe in order to administer the dose accurately.

⑰ In pediatric patients, post-arrest hypoglycemia should be treated with Dextrose 10% half-the dose delivered (2.5 mL/kg) and then blood glucose rechecked, and if measured glucose > 60 mg/dL no additional dextrose should be delivered.

If the rechecked blood glucose is < 60 mg/dL then administer an additional Dextrose 10% 2.5 mL/kg IV/IO; Hyperglycemia > 180 mg/dL should be avoided to optimize outcome.

⓲ Narcotic overdose should be suspected in cases where there is drug paraphernalia on scene or there is a witness report. Pinpoint pupils may be present, but hypoxia during cardiac arrest more often causes mydriasis (dilated pupils) instead.

⓳ EMS is assisting the Department of Public Health (DPH) in promptly investigating fatal or nonfatal drownings at public pools or spas in order to ensure safety can be verified before reopening. Contacting the on-call DPH officer will allow timely investigation of these incidents and prevent future incidents.

Treatment Protocol: SUBMERSION **Ref. No. 1225**

Base Hospital Contact: Required for ALOC and decompression emergencies (*Ref. 518*).

1. Assess airway and initiate basic and/or advanced airway maneuvers prn *(MCG 1302)*

2. For cardiac arrest, treat per *TP 1210, Cardiac Arrest* ❶

3. Administer **Oxygen** prn *(MCG 1302)*
   For suspected decompression illness ❷, provide **high flow Oxygen 15 L/min** and **CONTACT BASE**

4. Maintain supine if suspected decompression illness

5. Advanced airway prn *(MCG 1302)*

6. Initiate cardiac monitoring *(MCG 1308)*

7. Provide warming measures ❸

8. Establish vascular access prn *(MCG 1375)*

9. For altered level of consciousness, treat in conjunction with *TP 1229, Altered Level of Consciousness (ALOC)*

10. For respiratory distress, treat in conjunction with *TP 1237, Respiratory Distress* ❹

11. For poor perfusion or for suspected decompression illness:
    Normal Saline 1L IV rapid infusion; use warm saline if available
    Reassess after each 250 mL increment for evidence of worsening respiratory distress and if noted **CONTACT BASE** to discuss need to continue or hold Normal Saline based on patient condition ❹

    For persistent poor perfusion, treat in conjunction with *TP 1207, Shock/Hypotension*

12. Contact **Public Health 213-989-7140** for all submersion incidents involving pools or spas after transfer of patient care in the emergency department or upon termination of resuscitation in the field. ❺

SPECIAL CONSIDERATIONS

❶ Cardiac arrest from drowning should be treated per *TP 1210, Cardiac Arrest*. Ventilation is particularly important as the cardiac arrest is almost always due to respiratory failure. In cases of cold water drowning follow usual protocols for resuscitation while simultaneously rewarming the patient. Patients with hypothermia due to cold water drowning, may have good neurologic outcome despite prolonged resuscitation; resuscitative efforts should continue until the patient is rewarmed. Consultation with the Base Physician is required before consideration of termination of resuscitation in patients with suspected hypothermia.

❷ Decompression illness includes arterial gas embolism from barotrauma and decompression sickness (aka “the bends”) due to dissolved nitrogen in the blood coming out of solution. Decompression illness most frequently occurs in scuba divers after breathing compressed air at depth. While arterial gas embolism presents almost immediately after ascent, decompression sickness is often delayed and should be considered in any patient with symptoms (e.g. respiratory distress, ALOC, chest or body pain) within 24 hours of completing a dive. All patients with possible decompression illness need immediate evaluation for possible hyperbaric treatment. Per *Ref. 518*, contact Base immediately to discuss.

❸ Warming measures should include moving the patient to a warm environment as quickly as possible, removing wet clothing/items, covering with an emergency/rescue blanket or other blankets/sheets, and using warm Normal Saline if available.

❹ Rales may be present in patients after submersion/drowning due to direct lung injury and/or aspiration of water. This is not an indication of cardiogenic pulmonary edema (such as from congestive heart failure) and does not prohibit administration of IV fluids. IV fluids should be initiated and continued unless respiratory status worsens during administration.

❺ EMS is assisting the Department of Public Health (DPH) in promptly investigating fatal or nonfatal drownings at public pools or spas in order to ensure safety can be verified before reopening. Contacting the on-call DPH officer will allow timely investigation of these incidents and prevent future incidents.

Treatment Protocol: SUBMERSION **Ref. No. 1225-P**

Base Hospital Contact: Required for ALOC and decompression emergencies (*Ref. 518*).

1. Assess airway and initiate basic and/or advanced airway maneuvers prn *(MCG 1302)*
2. For cardiac arrest, treat per *TP 1210-P, Cardiac Arrest* ❶
3. Administer **Oxygen** prn *(MCG 1302)*
   For suspected decompression illness ❷, provide **high-flow Oxygen 15L/min** and **CONTACT BASE**
4. Maintain supine if suspected decompression illness
5. Advanced airway prn *(MCG 1302)*
6. Initiate cardiac monitoring *(MCG 1308)*
7. Provide warming measures ❸ ❹
8. Establish vascular access prn *(MCG 1375)*
9. For altered level of consciousness, treat in conjunction with *TP 1229-P, Altered Level of Consciousness (ALOC)*
10. For respiratory distress, treat in conjunction with *TP 1237-P, Respiratory Distress* ❺
11. For poor perfusion or for suspected decompression illness:
    Normal Saline 20mL/kg IV rapid infusion per *MCG 1309*; use warm saline if available ❺
    For persistent poor perfusion, treat in conjunction with *TP 1207-P, Shock/Hypotension*
12. Contact **Public Health 213-989-7140** for all submersion incidents involving pools or spas after transfer of patient care in the emergency department or upon termination of field resuscitation in the field. ❻

SPECIAL CONSIDERATIONS

❶ Cardiac arrest from drowning should be treated per *TP 1210-P, Cardiac Arrest*. Ventilation is particularly important as the cardiac arrest is almost always due to respiratory failure. In cases of cold water drowning follow usual protocols for resuscitation while simultaneously rewarming the patient. Patients with hypothermia due to cold water drowning, may have good neurologic outcome despite prolonged resuscitation; resuscitative efforts should continue until the patient is rewarmed. Consultation with the Base Physician is required before consideration of termination of resuscitation in patients with suspected hypothermia.

❷ Decompression illness includes arterial gas embolism from barotrauma and decompression sickness (aka “the bends”) due to dissolved nitrogen in the blood coming out of solution. Decompression illness most frequently occurs in scuba divers after breathing compressed air at depth. While arterial gas embolism presents almost immediately after ascent, decompression sickness is often delayed and should be considered in any patient with symptoms (e.g. respiratory distress, ALOC, chest or body pain) within 24 hours of completing a dive. All patients with possible decompression illness need immediate evaluation for possible hyperbaric treatment. Per *Ref. 518*, contact Base immediately to discuss.

❸ Warming measures should include moving the patient to a warm environment as quickly as possible, removing wet clothing/items, covering with an emergency/rescue blanket or other blankets/sheets, and using warm Normal Saline if available.

❹ Infants and small children are at high risk for hypothermia due to their large surface area to body mass ratio, reduced ability to shiver, and limited body fat.

❺ Rales may be present in patients after submersion/drowning due to direct lung injury and/or aspiration of water. This is not an indication of cardiogenic pulmonary edema (such as from congestive heart failure), which is extremely rare in children, and does not prohibit administration of IV fluids. IV fluids should be initiated and continued unless respiratory status worsens during administration.

❻ EMS is assisting the Department of Public Health (DPH) in promptly investigating fatal or nonfatal drownings at public pools or spas in order to ensure safety can be verified before reopening. Contacting the on-call DPH officer will allow timely investigation of these incidents and prevent future incidents.

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"To advance the health of our communities by ensuring quality emergency and disaster medical services."

Health Services
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August 25, 2021

TO: Distribution

FROM: Cathy Chidester
Director

Marianne Gausche-Hill, MD
Medical Director

SUBJECT: STANDARD GUIDANCE FOR FIRST RESPONDERS ENTERING HOSPITAL/HEALTH FACILITIES

In light of the Public Health Order regarding Health Care Worker Vaccination Requirement, the Hospital Association of Southern California (HASC) and the Emergency Medical Services (EMS) Agency held a meeting with representatives from first responders' and hospitals' leadership on August 23, 2021. The goal of the meeting was to standardize expectations when first responders enter hospital facilities to avoid confusion with the Health Order which may impede and negatively impact the provision of medical care to patients.

The following principles were established at the meeting:

- Law enforcement, fire, and EMS personnel are not classified as "visitors" when accessing hospital/medical facilities for patient care and transport (see CDPH All Facilities Letter (AFL) 21-31 and Frequently Asked Questions issued August 20, 2021).
- Law enforcement, fire, and EMS personnel, when on duty, are considered first responders and/or pre-hospital care workers.
- Facility staff should not be requesting verification of vaccination status and/or COVID-19 tests results of first responders who are entering the facilities.
- Employers of first responders are responsible for supplying its employees with surgical or N95 respirators. Hospitals/medical facilities are requested to make surgical masks readily available for first responders at the point of entry of the facility.
- Law enforcement agencies will instruct and educate their officers that a surgical mask is required and a best practice for health hygiene to prevent exposure to any infectious diseases while in the hospital.
- Law enforcement officers will request a detainee to wear a mask recognizing that they cannot force the detainee to do wear the mask. Hospital staff will need to address, following their normal procedures, mask wearing by the patient.

- The employers of first responder are responsible for addressing compliance with the Public Health Officer's vaccination mandate as applicable.

Effective immediately, all first responders must wear, at minimum, a surgical mask upon entering a hospital or medical facility. The surgical masks, covering nose and mouth, must be worn at all times while in the facility. N95 respirators and additional personal protective equipment shall be worn as appropriate.

Any instances in which first responders do not comply with wearing a surgical mask at all times while in healthcare facilities, should be referred to their employer as soon as possible. Hospitals/medical facilities are requested to make surgical masks readily available for first responders at the point of entry of the facility.

Any facility that wishes to establish a policy that varies from this guidance should reach out to their local first responder agency administration with their specific policy. The EMS Agency has established great relationships and communications throughout our system and appreciate your cooperation. Please contact Dr. Gausche-Hill at mgausche-hill@dhs.lacounty.gov or Cathy Chidester at cchidester@dhs.lacounty.gov if you have any questions.

c: Hospital CEO
CDPH
Department of Public Health

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