



COVID-19 EMSA SPECIAL REPORT



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SFDPH Health Commission Meeting



POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH

Presentation Summary

- MHOAC
- EMS Surge Plan
- Transportation Hub
- CADDiE Project
- Decedent Testing Unit
- LUCAS Device Deployment
- New/Updated Policies and Protocols
- COVID-19 Contact Tracing and Notification for EMS Providers
- Regular EMSA Business



Medical Health Operations Area Coordinator (MHOAC) and COVID-19 Response

What is MHOAC?

- MHOAC stands for Medical Health Operations Area Coordinator. This is the liaison/conduit for medical resources flowing into and out of San Francisco up to the Region (we are in Region II) and the State.
- In San Francisco, the MHOAC representative is John Brown, MD

How does MHOAC interact with the DOC/EOC, health care system, and the region?

The MHOAC communicates with the Region and the State on medical needs related to the flow of medical equipment/supplies/personnel and patients in and out of SF. The MHOAC serves as a single point of contact on both the SF side (for questions about regional and state medical resources) and the region/state side for medical conditions/needs in SF.

Examples of MHOAC functions

- Coordination of disaster medical and health resources
- Coordination of patient distribution and medical evaluations
- Coordination with inpatient and emergency care providers
- Coordination of the establishment of temporary field treatment sites



Medical Health Operations Area Coordinator (MHOAC) and COVID-19 Response continued

MHOAC has been involved in the following activities:

- Submitted 50 resource requests for supplies such as Personal Protective Equipment, cleaning supplies, Federal Medical Station, scarce medications, and personnel
- Fulfilling requests from surrounding counties such as medication requests
- Assisting with tracking of patients being transferred into SF from other counties, specifically Imperial County and San Quentin, but even earlier in the pandemic with patients from the Grand Princess cruise ship
- Assisting with the development of a stabilization plan for Skilled Nursing Facility's that experienced staffing deficiencies due to COVID
- Responding to requests from the State Office of Emergency Services
- Coordinated SF allocation and reporting of the drug Remdesivir



SF EMS System COVID-19 Surge Plan

Level A

- Current Status
- Normal Staffing
- APOT < 60 min
- COVID-19 Unit Usage (4-5 as of 3/17)
- Normal response times
- Average call volume for date/time

Level D

- Level B-D triggers
- Est. 30% reduction in services (ie staffing) or above FW threshold
- APOT > 120 min, 2 or more hospitals, unable to clear units
- Increased time on task by 30%
- Medic to Follow/Phantom Medics (-5 calls pending) w/ interventions
- Response time compliance down 30%

Triggers

Level B

- Est. 10% reduction in services (ie staffing) or above FW threshold
- APOT > 60 min, 2 or more hospitals (sustained)
- Increased time on task by 10%
- Medic to Follow/Phantom Medics (-5 calls pending)
- Response time compliance down 10%

Level E

- Level B-E triggers
- Est. 50% reduction in services (ie staffing) or above FW threshold
- APOT > 180 min, unable to clear units
- Increased time on task by 50%
- Medic to Follow/Phantom Medics (-5 calls pending) w/ interventions
- Response time compliance down 50%

Level C

- Level B-C triggers
- Est. 20% reduction in services (ie staffing) or above FW threshold
- APOT > 60 min, 2 or more hospitals, unable to clear units
- Increased time on task by 20%
- Medic to Follow/Phantom Medics (-5 calls pending) w/ interventions
- Response time compliance down 20%
- MCI RED Alert (10+ Pts and/or significant EMS involvement)
- Major resource deployment (ie building collapse)

ALL Levels

- Consider Hospital Status for ALL Levels
- May be one trigger or multiple triggers
- **Procedure to move to higher level**
 - 1) EMSA Medical Director makes decision increase Level
 - 2) Notification made to CCSF Health Officer
 - 3) Initiate Conference Call within 15 minutes via ReddiNet with Primary EMS Provider Contact (Secondary if unavail.)
 - 4) Inform PIO/JIC for messaging and announcements
 - 5) Message via ReddiNet/Radio/CAD Messages
 - 6) Distribute Preplanned EMS Memos/Documents

Monitoring Tools

- FirstWatch (2 hr interval 24/7 **Level C-E**)
- ReddiNet (2 hr interval 24/7 **Level C-E**)
- CAD
- SFDPH COVID-19 Data Metrics



COVID-19 Transportation Hub

The EMSA Transportation Hub provides the following services:

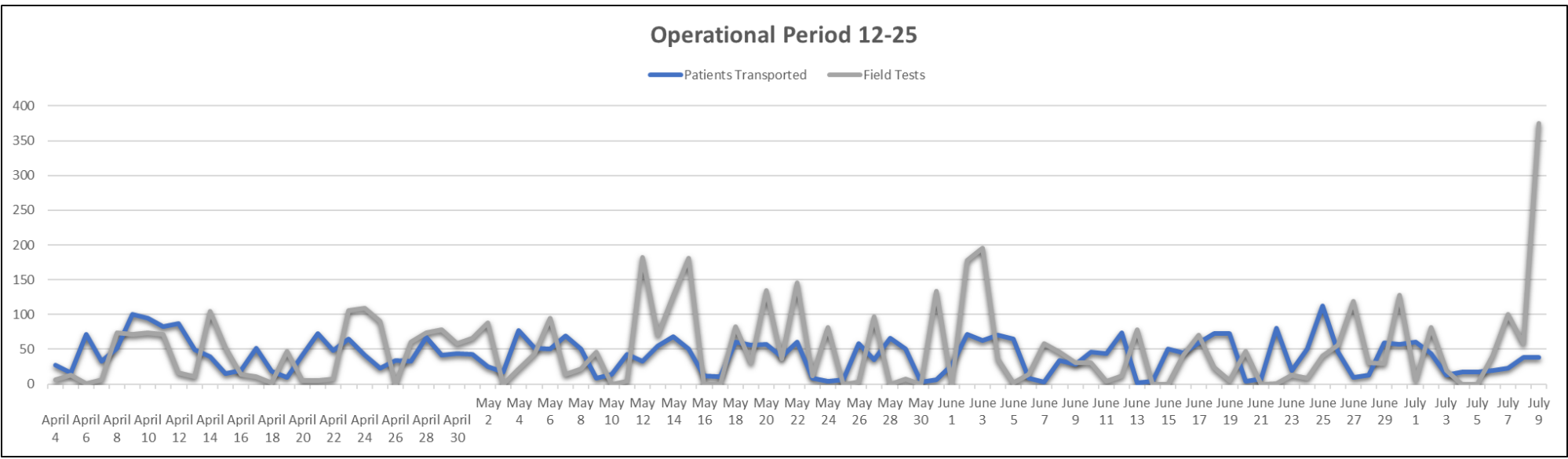
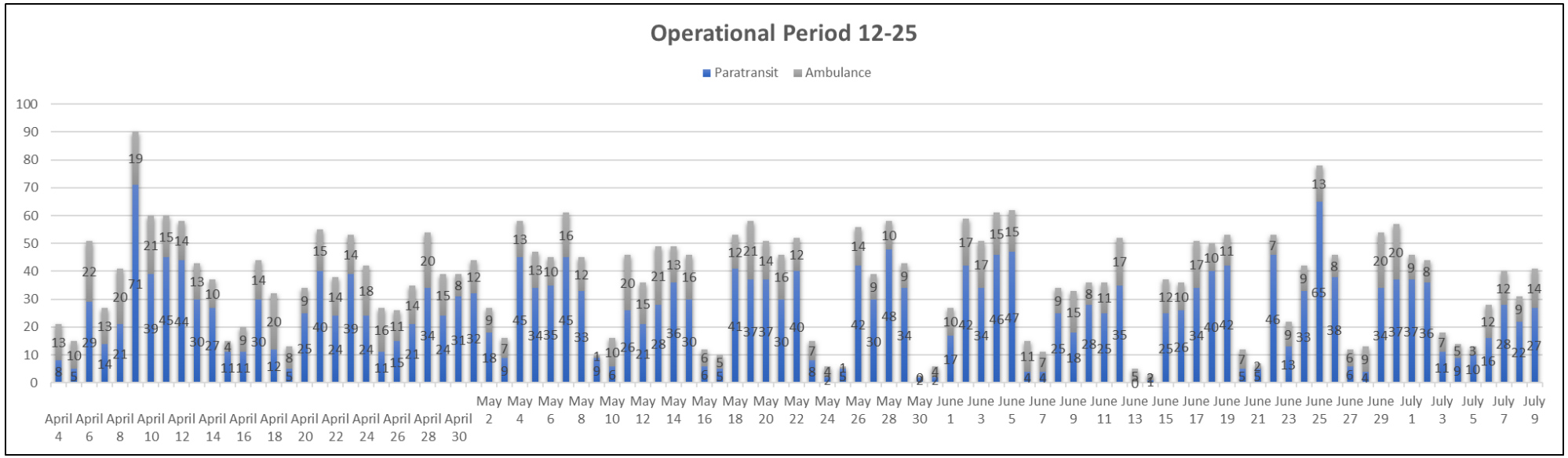
- Non-Emergent Transportation
 - For PUI's and COVID-19 positive patients who require non-emergent but isolated transport to home, temporary shelter sites, or medical appointments.
 - For Non-PUI or COVID-19 positive homeless individuals requiring transport from shelters or street to temporary shelter sites.
 - Ambulances perform interfacility transports out of San Francisco hospitals to support sufficient bed capacity and intra-hospital patient flow.
- 911 System Support
 - Ambulances are utilized in the 911 system to provide transport for low-acuity COVID-19 positive or PUI patients in order to maintain adequate 911 system levels.
- COVID-19 Field Testing
 - Ambulances transport Public Health RN's into the field to perform COVID-19 sample collection, which are then taken to the DPH lab for analysis.



COVID-19 Transportation Hub

Overall Total Number of Transports: 3,560
Paratransit: 2,441
Ambulance: 1,119
**Data through July 9th*

Total Number of Field Tests: 4,879
**Data through July 9th*



Automated External Defibrillator (AED) Deployment

30 units at the Emergency Medical Services Agency (EMSA) that will be deployed to various Shelter in Place (SIP) sites and Field Care Clinics. We are working with Human Services Agency leadership now to coordinate training for staff of 27 active sites with goal of having all personnel trained by end of July and devices distributed to these sites.



Centralized Ambulance Destination Determination (CADDiE) Project

The CADDiE Base operates 24/7 out of the EMS Transportation Operations Center and **has fielded approximately 11,600 destination contacts from 911 EMS crews to-date.**

Through this program EMSA is attempting to accomplish the following:

- Reduce hospital time on diversion
- Improve distribution of EMS patients system-wide, accounting for ED, ICU, and Med Surge capacities
- Decrease ED boarding
- Decrease ED length-of-stay for both admitted and discharged patients
- Decrease ambulance patient offload times
- Improve certain EMS time intervals, such as time-on-task and transport times

These metrics are actively tracked and analyzed, and many are viewable via public dashboards on the EMSA website.



Centralized Ambulance Destination Determination (CADDiE) Project

Updated 7/6

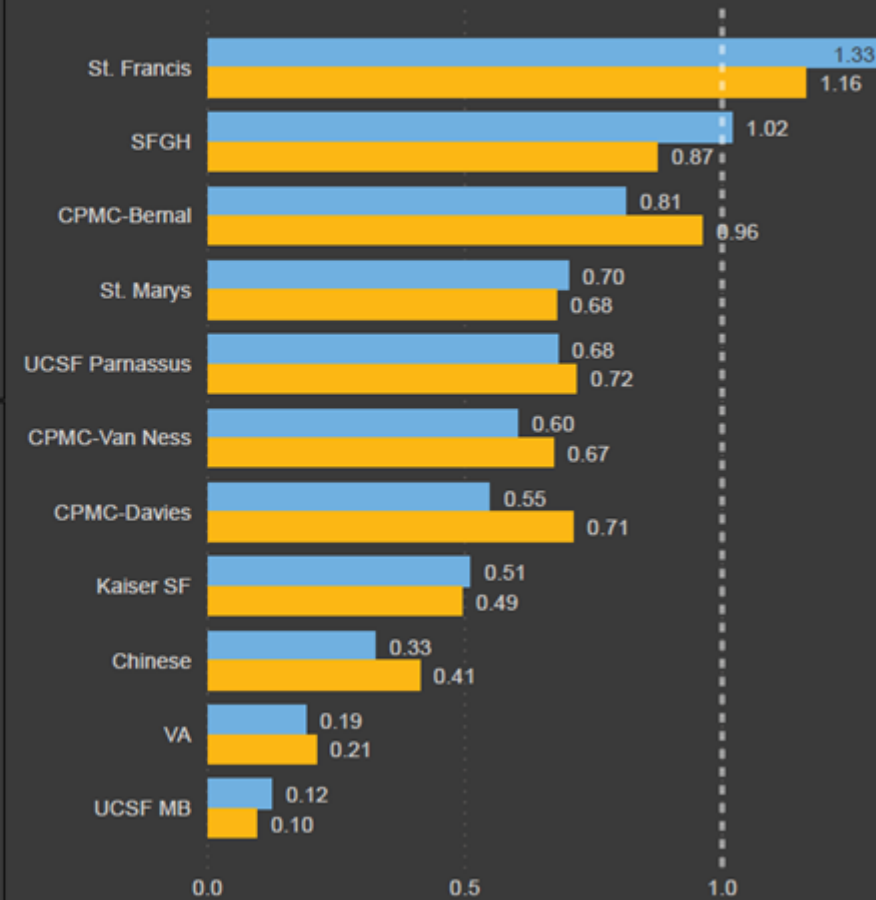
For the purpose of accurate comparison, all "Pre-CADDiE" data is based off averages for the month prior to beginning CADDiE. This is to ensure relevant comparison within an atypical operational period (COVID-19 response).

To-Date EMS System Compliance Rate

0.72

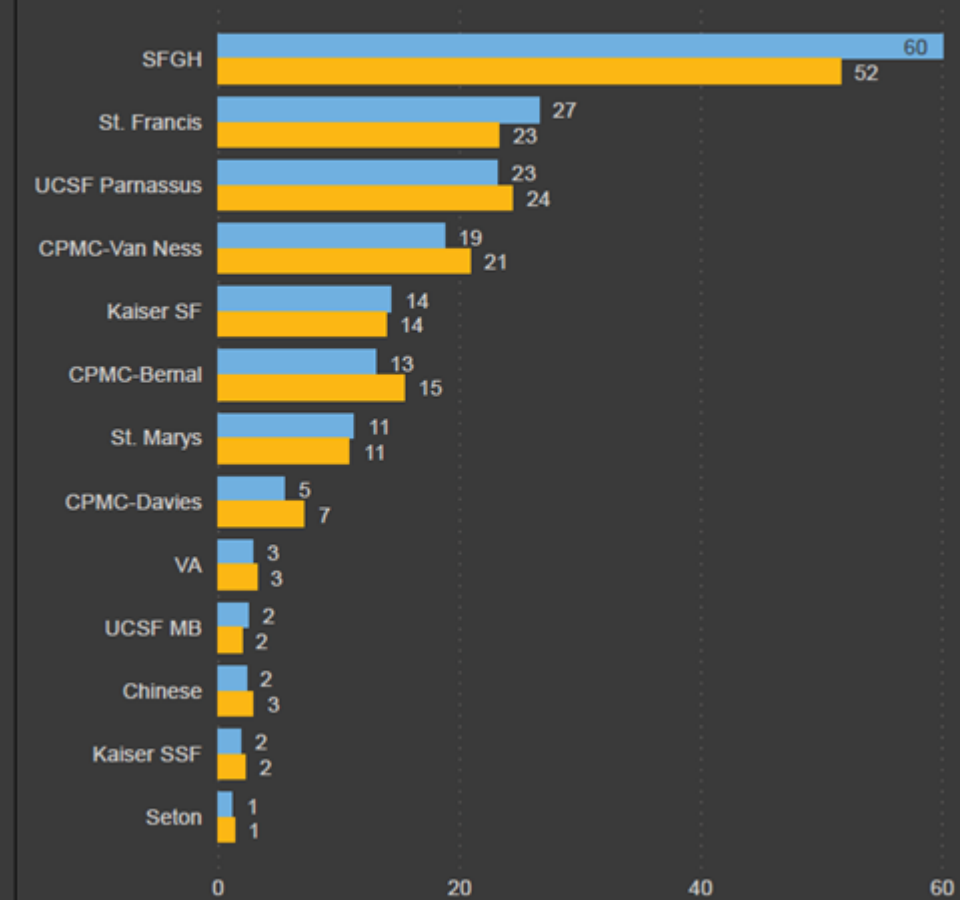
Average Daily Transport to Static ED Bed Ratio

● Pre-CADDiE ED Ratio ● To-Date ED Ratio w/ CADDiE



Average Daily Transports by Hospital

● Avg Transports Pre-CADDiE ● Avg Transports w/ CADDiE



Centralized Ambulance Destination Determination (CADDiE) Project Summary

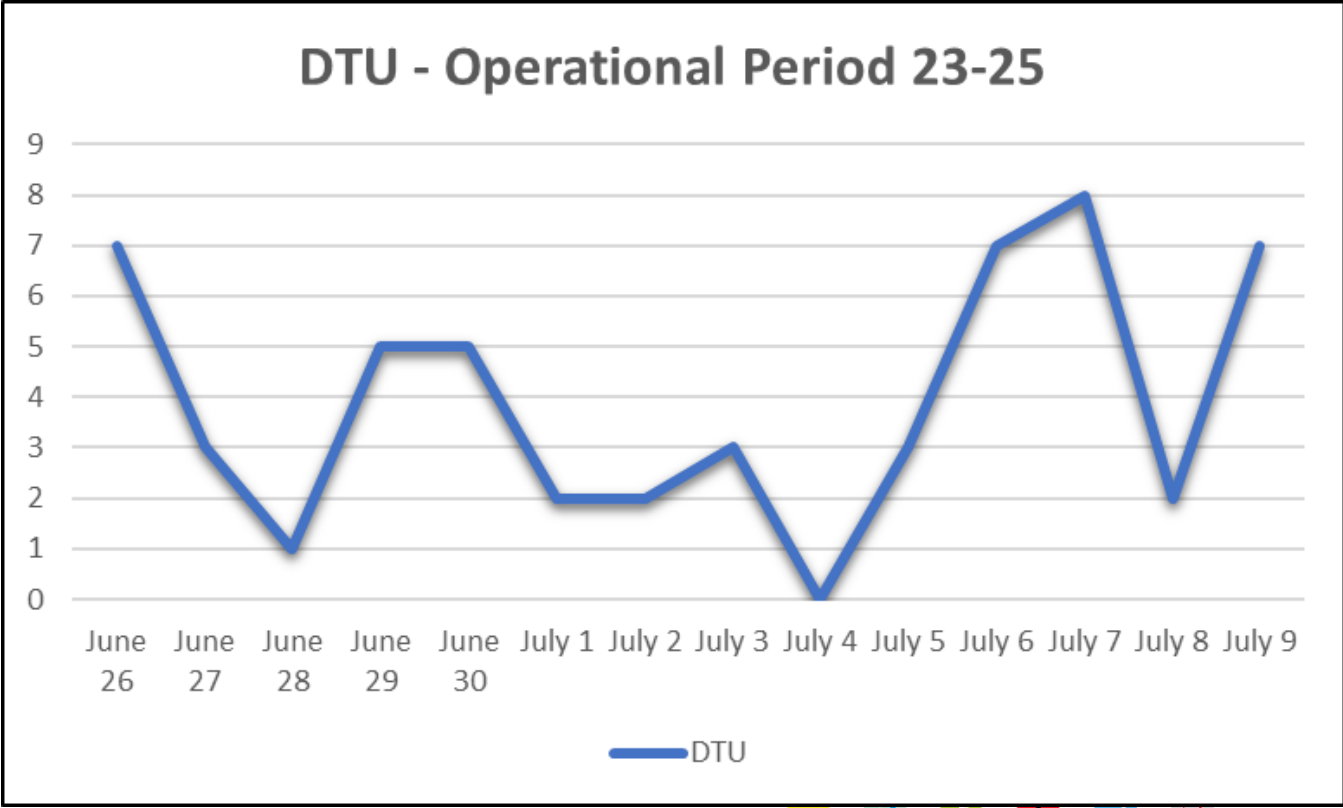
- Due to the COVID-19 Pandemic, Emergency Medical Services (EMS) call volume has decreased by 20%
- CADDiE System in place to level load EMS Surge
- Hospital Diversion Percentages
 - Percentage of Total Diversion Hours February 2019 – June 2019 was 13.04%
 - Percentage of Total Diversion Hours February 2020 – June 2020 was 5.94%
 - In comparing these two points in time, **there has been an overall percentage decrease of 7.1%**



COVID-19 Decedent Testing Unit

To facilitate testing of patients who are deceased in the field, a Decedent Testing Unit (DTU) program has been established and will operate within a larger workflow that includes the Office of the Medical Examiner (OME) and local skilled nursing facilities. BLS ambulances assigned to the COVID-19 transport operations respond to these incidents at the request of 911 EMS providers to perform sample collection.

Total Number of Decedent Tests: 55
**Data through July 9th*



Lund University Cardiopulmonary Assist System (LUCAS) Device Deployment

- Mechanical Cardiopulmonary Resuscitation (CPR) Device
- Can help minimize COVID-19 responder exposure and improve patient care due to non-stop CPR
- **Trained over 250 first responders on how to use the device 5/4 – 5/6/20**
- Began Deployment of LUCAS 3 Devices on June 10th to 9-1-1 Provider Agencies
 - **12 devices procured as of 7/14/20**
 - **8 distributed to field and EMS Providers**
 - 4 readily deployable by Rescue Captains (RCs) to all Cardiac Arrests
 - 2 are staged as fail-saves with American Medical Response (AMR) and King American Supervisor Vehicles
 - 1 distributed to SFDPH Marine Unit for SF Bay emergencies
 - 1 is staged at the Southeast Health Center (SEHC) Field Care Clinic
 - 4 are maintained on rotational basis, but stand ready to be deployed to Myocardial Infarction / Post Arrest hospitals once hospitals are ready for use.



New/Updated Policies and Protocols

New Protocol – **Mechanical CPR Device**

The EMS Agency procured LUCAS 3 mechanical compressors which were deployed to the field via paramedic clinical supervisors. These devices reduce exposure to EMS providers when treating cardiac arrest patients.

New Protocol – **Respiratory Pandemic**

Comprehensive protocol to be activated under special circumstances which provides guidance to EMS in a wide range of areas during respiratory pandemic response periods.

New Policy – **Assess & Refer**

As part of the EMS surge plan, this policy gives paramedics the ability to work with Base Hospital physicians or advise nurses on devising alternative care plans for lower-acuity patients, reducing ED volume and EMS utilization during times of surge.

Revised Protocol – **Respiratory Distress: Bronchospasm**

Approves the use of metered dose inhalers as a delivery route for albuterol, reducing exposure to aerosols in comparison with nebulizers.

Revised Protocol – **Airway Management**

Prioritizes use of supraglottic airway adjuncts over endotracheal intubation to reduce exposure.



New/Updated Policies and Protocols Continued

EMS System Memo – **Alternative Care Sites**

Approves non-hospital care sites as an approved destination for EMS, and established criteria on which patients are appropriate for these facilities. EMS providers are currently utilizing the South East Health Clinic as an alternate care site.

EMS System Memo – **Chinese Hospital as a Full Receiving Facility**

Approves Chinese Hospital as a destination for a greater range of EMS patients, include those meeting criteria for Critical Medical.

EMS System Memo – **Use of BLS Ambulances in the 911 System**

Enables utilization of Basic Life Support ambulances in the 911 system to meet call demand during times of surge and keeps a greater number of Advanced Life Support ambulances available for high-acuity call types.

Local Optional Scope of Practice – **COVID-19 Sample Collection by EMS Providers**

With approval through the California EMS Authority, allows EMS providers to obtain COVID-19 samples in the field

Local Optional Scope of Practice – **EMS Providers in Static Health Facilities**

With approval through the California EMS Authority, allows EMS providers to work and provide care in static settings, such as skilled nursing facilities or alternative care sites. This provides an option to utilize EMS during times of staffing shortages within the facilities.



COVID-19 Contact Tracing and Notification for EMS Providers

Early in the COVID-19 response, it became apparent that EMS providers were not being included in the standard contact investigations and were coming in contact with COVID-19 patients. In March, EMSA began using the DPH-generated line list of positive patients to identify those who mapped to 911 calls. Dispatch and clinical records are then queried to identify the responding units and notifications are made to the respective provider agencies.

- **Since 3/20/2020, 316 notifications for positive EMS contacts have been made.**

EMSA is working with local hospitals to develop automated notification processes for COVID-19 positive patients who arrive by EMS. This has been implemented successfully in ZSFG's EPIC system and we hope to expand this to other hospitals.



Regular EMSA Business

- Service Provider Agreement Completed
- New Ambulance Audit Tool
- EMT Certifications and Accreditation January 2020 – June 2020
 - EMT Initial Certification: 46
 - EMT Renewal Certification: 371
 - EMT-Paramedic Initial Accreditation: 18
 - EMT-Paramedic Re-Accreditation: 119
- Planned Office Moves: EMSA Will Undergo 2 Separate Moves -
 - Move to 25 Van Ness, 7th floor in August 2020
 - Move to 333 Valencia, 2nd floor in Spring 2021
(permanent location)





THANK YOU!



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