Agenda

4:00 p.m.  1.  Introduction of Members and Guests

4:03   2.  Approval of Minutes from June 13, 2018

4:05   3.  Comments from the Public
        Members of the public may speak up to 3 minutes each on matters either on or not on this agenda.

4:08   4.  Chair’s Report
        Kacey Hansen, EMCC Chair

4:10   5.  Members’ Reports

4:15   6.  Recognition for Disaster Response: Michael Johnson and Chad Newland, AMR

4:25   7.  EMCC Legislative Report: ENA rep

4:30   8.  Fire Chiefs’ Report
        Fire Executive Chief Representative

4:40   9.  Quarterly Update on Alliance Ambulance Services
        Chief Terence Carey, Contra Costa County Fire Protection District

4:50  10.  EMCC 2018 Annual (Draft) Report Action: Review/Approve for Submission to the Board of Supervisors

5:00  11.  EMS Medical Director’s Report
        David Goldstein, MD, Contra Costa EMS Medical Director

5:10  12.  Approval of 2018 EMS System Plan Objectives: Action Item
        Pat Frost, Contra Costa County EMS Director

5:15  13.  EMS Director’s Report including Ambulance Ordinance
        Pat Frost, Contra Costa County EMS Director

5:25  14.  Agenda Items for next meeting: June 12, 2019

5:30  15.  Adjournment
EMERGENCY MEDICAL CARE COMMITTEE
CONTRA COSTA COUNTY

MEETING MINUTES
June 13, 2018

Members Present Representing

Chair: Kacey Hansen Trauma Center (CC Contract)
Vice Chair: Gary Napper Public Managers’ Association
Executive Committee:
   Ellen Leng Alameda-Contra Costa Medical Association
   Terence Carey Ambulance Providers (CC Contract)
   Pat Frost EMS Agency Director
   David Goldstein EMS Agency Medical Director
   Denise Pangelinan Communications Center Managers’ Assoc.
   Anthony Rodigin Emergency Dept. Physicians (CC Receiving Hospital)
   David Samuelson Emergency Nurses Assoc. East Bay
   John Speakman District II
   Kelley Stieler District I
   Allan Tobias District IV
   Jason Vorhauer Contra Costa Office of the Sheriff

Members Absent Representing

Ara Gregorian California Highway Patrol
Jon King Police Chiefs’ Association
Elaina Petrucci Gunn American Heart Association

STAFF PRESENT
Rachel Morris Contra Costa County EMS

OTHERS PRESENT
Joanny All American Medical Response
Jennifer Lucas American Red Cross
Chad Newland American Medical Response
Jill Ray District II
Rebecca Rozen Hospital Council of Northern and Central California

Chair Hansen called the meeting to order at 4:10 p.m.

1. Introduction of Members and Guests
2. Approval of Minutes from March 14
   Member Speakman motioned to approve the Minutes from March 14, 2018. Member Napper seconded; none opposed. Motion passed. March minutes are approved.
3. Chair’s Report - Kacey Hansen, EMCC Chair
   No Report
4. Comments from the Public
   No Comments
5. Members’ Reports
   No Reports
6. American Red Cross Presentation
   Jennifer Lucas, CCC Disaster Program Manager for the American Red Cross gave a presentation on Red Cross programs and recent activities within the County. Covered Contra Costa disaster cycle: prepare-respond-recover. Preparation is 95% of cycle. Red Cross three largest programs: 1. DAT (disaster action team) - a team of Red Cross volunteers who help people after a fire, day or night. Disaster Health Services, spiritual, mental care; 2. Home Fire Preparedness Campaign - have teams that will go out into at risk communities and install free 10 year smoke alarms and educate on fire safety; 3. Pillow case project - sponsored by Disney - go into schools within the County and talk to third, fourth, and fifth graders about disaster preparedness and how to respond. Red Cross is involved in upcoming yellow command UASI training drill, providing the shelter element to that drill. Red Cross continues to work with community partners and Lucas stated a need to connect with the EMS community more. Member Carey thanked her for the service of the Red Cross and asked if the Red Cross tracks the number of smoke alarms donated, where they are installed, etc. Lucas was able to share that the Red Cross reached over 530 homes and installed over 5,000 alarms. Member Carey asked what information does the Red Cross need during “call for the canteen”; Lucas stated “I have X number of responders and expect to be here X number of hours” - can ask for water, coffee, snacks, sandwiches, etc. Vice Chair Napper asked what does the Red Cross do for animals? Lucas – the County has great resources; can set up a “4 legged” shelter next to a “2 legged” shelter. Only allow service animals into human shelters.
7. EMCC Legislative Update
   No Report
### 8. Fire Chiefs’ Report

No Report

### 9. Quarterly Update on Alliance Ambulance Services – Chief Terry Carey, CCCFPD
- Member Carey recognized Chad Newland, AMR, for his involvement with training members of the public in hands only CPR.
- Continuing effort of meeting with hospital partners and working with hospitals on wall times – Rebecca Rozen, Hospital Council, assisting with meeting facilitation.
- Member Goldstein, along with MDs Gene Hern and Peter Benson have been working through a dispatch process to get the appropriate units to the respective calls. Had been sending engine and ambulance code 3; looking at usefulness of that and how does that affect other calls with rigs being tied up. CCCFPD is adding engine companies/personnel to the Department and still can’t always keep up with population growth, so a streamlined process could help with that.
- ALS IFT program – efforts continuing to promote/market the program. Member Frost added that the reason for the program came from an expressed need from hospital stakeholders and is exclusive to Contra Costa Fire. Member Carey stated that one hospital expressed interest to enter into a contract for the program, but an effort is being made to not move too quickly while the program ramps up.

### 10. Nominations and Election for Executive Committee Vacancy (Action Item)
Chair Hansen addressed the vacancy on the EMCC executive committee. -Member Frost had been advised of potential nominee; Member King who was willing to fill the executive committee vacancy, if needed. Member King was absent at the meeting, but Chair Hansen clarified a nomination can still be made. Member Leng made a motion to nominate Member King. Member Vorhauer seconded the nomination; none opposed. Motion passed.

### 11. EMS Medical Director’s Report - David Goldstein, MD, Contra Costa EMS Agency Medical Director
Member Goldstein reported on the CPR Highly Defined (CPR-HD) Pilot Study. It is a choreographed process to delivering CPR - the goal has been to trial a very prescribed set of roles with the intent of improving cardiac arrest care, and then to generalize and roll out across the entire County. The trial has been successful up to this point; the next step is how to roll out. Member Goldstein expects this will roll out (goal) by the beginning of 2019. Chair Hansen requested a presentation at the next EMCC meeting of what the pilot results are before rolling out to the County.

### 12. EMS Director’s Report - Pat Frost, Contra Costa EMS Agency Director
- San Ramon RFP – the Board of Supervisors (BOS) approved a one year contract extension to allow further exploration of 224 rights. EMS Agency will bring issue back to BOS for further direction, by January 2019.
- Ambulance Ordinance – still with County Counsel; have had some back and forth. What is happening: we get close to the next step, but then additional questions come up before can move forward. New document should be much improved.
- ePOLST (electronic Physician Order for Life Sustaining Treatment) Registry – Prehospital pilot project went live in April. It allows EMS field provider to query whether patient has order for life sustaining treatment while in the field. The success of the registry depends on having enough records to make the program work; the registry continues to grow as we collect more data.
- Alta Bates – no new news on hospital closure.
- LEMSA directed by BOS Finance Committee to work with Fire Executive Chiefs to explore a ballot measure; LEMSA to collaborate on a proposal.
- 2nd Annual Survivors Reunion – LEMSA asking for cases and continuing to accept event sponsorships. Handout provided.
- Contra Costa EMS received Gold Plus Mission Lifeline award for STEMI care.
- APOT report (handout) – focus on delays greater than 1 hour, sometimes up to 2-3 hours. Report shows 435 instances so far. Last year averaging 63 a month, this year it is up to 83 a month. All parties need to help to turn ambulance performance times around. The EMS Agency does not allow ED diversion in this County.
- LEMSA working with the Hospital Council to create a ReddiNet report card. Two years ago LEMSA has expanded use of ReddiNet to support real time emergency communication throughout the health care system-wide. It is now connected to hospitals, dispatch, long term care facilities and ambulance providers to support situation awareness and disaster communications.
- EMS Authority has denied our RFP and system plan, alleging LEMSA did not hold fair competitive process; County has appealed. Nothing changes to EMS system service delivery. We have not yet received a response to our appeal. Chair Hansen asked that a news article be shared with EMCC as part of minutes.

### 13. Proposed agenda items for September 12, 2018: CPR Highly Defined (CPR-HD) Pilot Presentation. Location of next meeting will be at the new EMS office, pending actual move in August.

### 14. Adjournment at 5:30pm
EMERGENCY MEDICAL CARE COMMITTEE
CONTRA COSTA COUNTY

Informal Discussion Session
September 12, 2018

Members Present Representing

Chair: Kacey Hansen Trauma Center (CC Contract)
Vice Chair: Gary Napper Public Managers’ Association

David Goldstein EMS Agency Medical Director
Denise Pangelinan Communications Center Managers’ Assoc.
David Samuelson Emergency Nurses Assoc. East Bay
Jason Vorhauer Contra Costa Office of the Sheriff

Members Absent Representing

Executive Committee:
Jon King Police Chiefs’ Association
Ellen Leng Alameda-Contra Costa Medical Association

Terence Carey Ambulance Providers (CC Contract)
Pat Frost EMS Agency Director
Ara Gregorian California Highway Patrol
Elaina Petrucci Gunn American Heart Association
Anthony Rodigin Emergency Dept. Physicians (CC Receiving Hospital)
John Speakman District II
Kelley Stieler District I
Allan Tobias District IV

STAFF PRESENT
Jesse Allured Contra Costa County EMS
Chad Henry Contra Costa County EMS
Geoff Martin Contra Costa County EMS
Rachel Morris Contra Costa County EMS

OTHERS PRESENT
Joanny All American Medical Response
Joe Greaves ACCMA
David Lopez ACCMA
Chad Newland American Medical Response
Rebecca Rozen Hospital Council of Northern and Central California
Rick Stephenson Contra Costa County Fire Protection District

1. Introduction of Members and Guests
2. Approval of Minutes from June 13
   A quorum was not achieved; minutes could not be approved at this meeting.
3. Chair’s Report - Kacey Hansen, EMCC Chair
   No Report
4. Comments from the Public
   No Comments
5. Members’ Reports
   No Reports
6. CPR-HD Presentation
   Presentation from Contra Costa EMS and AMR staff on CPR-HD (Highly Defined) pilot. Pilot initiated to address patient and provider safety issues, initiated CPR-HD pilot to standardize approach of looking at Cardiac Arrest management. This is a system wide approach to improve management of Cardiac Arrest. Presentation covered aim, primary and secondary components, and identified improvements of the pilot. Training consisted of select AMR crews, some CCCFPD crews, and all ECCFPD crews. The process involves use of a script with a stop watch to keep time. CPR-HD can work with as little as two people, including both ALS and BLS personnel. The pilot concluded at the end of July 2018. Effective Jan 1 2019, all providers will be using the CPR-HD method.

7. Housing and Homeless Services Overview Presentation
   Jaime Jennet from the Health, Housing and Homeless Services Division gave overview of statistics and services for homeless community in Contra Costa County. Presented the question of how many people encounter homeless people at their jobs and how many people know how to handle them. Currently not enough shelter for those in need, so figuring out a method for who gets in those shelters is key. There is an increase in the senior population. 2017 HMIS Data - 6015 homeless, 1057 at risk, 1022 formerly homeless. Homeless outreach CORE teams - EMS personnel can call CORE team to help provide resources is person doesn’t have a medical emergency. HUD created coordinated entry to streamline services offered for the homeless population; it is a way to triage people to connect them with the appropriate resources. Points of entry: call 211 to help
Informal Discussion Session – September 12, 2018

8. **Health Information Exchange (HIE) Update**
   Update on the Bidirectional Health Information Exchange, a process of taking info from disparate health records systems so we can connect them back and forth. Transitioning from paper records to electronic records saves crews time and removes roadblocks. HIE allows for immediate information about a patient. How’d We Get Here: AB 1129 mandated (unfounded) that records be electronic by 2016 - CCC brought last provider online two weeks ago so we are now fully in compliance. Next steps - evaluating CMS grant funding opportunity through EMSA - we need to evaluate to see if this funding method is the right fit for us. Chad to send Kacey Hansen criteria for grant from EMSA - stricter than what CMS previously stated. Pilot project would be with the County Hospital.

9. **EMCC Legislative Update**
   Update on AB 3115 - Community Paramedicine - ENA wanted to be at the table - never came out in support, nor opposition, just wanted to be at the table. AB 3115 proposed to put alternate destination - extend to 2025. EMSAAC, EMDAAC, ENA rallied and now share the seat - trying to get the governor to veto.

10. **Quarterly Update on Alliance Ambulance Services – Chief Stephenson, CCCFPD for Chief Carey, CCCFPD**
    - Amazed what Alliance has done over 2.5 years - well over 95-97% compliance rate in response times.
    - APOT times: in process of setting up meeting with LEMSA to go over proposal. AMR/CCCFPD staff working with ED staff to recognize challenges and find ways to overcome.
    - Card 33: getting the right piece of equipment and right personnel to a call - data shows working well so far.
    - AMR and CCCFPD sent task forces to the Carolinas for Hurricane response.

11. **EMS Director’s Report – David Goldstein, Contra Costa EMS Medical Director for Pat Frost, EMS Director**
    - San Ramon RFP: the Board of Supervisors (BOS) approved a one-year contract extension to allow further exploration of 224 rights and San Ramon has signed the extension. EMS Agency will bring issue back to BOS for further direction, by January 2019.
    - Ambulance Ordinance: EMS hopes to schedule a special meeting with the EMCC sometime between October and December. The final draft is with County Counsel.

12. **EMS Medical Director’s Report – David Goldstein, Contra Costa EMS Medical Director**
    AB 3115 – Community Paramedicine – this bill is sitting on the Governor’s desk and potentially will become law. Addresses 1. Destination 2. Treat and Release. Mandates training for paramedics that don't exist now, so the regs would need to be written by EMSA. Could create a potential problem with sobering center.

13. **Proposed agenda items for December 12, 2018 meeting:**
    - Approval of June draft minutes
    - The December EMCC meeting will take place at the new EMS office: 777 Arnold Drive, Suite 110, Martinez.
    - EMS hopes to schedule a special EMCC meeting between Oct-December to share the draft in preparation for the formal ordinance hearing at the BOS in early 2019.

14. **Adjournment at 5:30pm**
# Emergency Medical Care Committee

**Contra Costa County**

## Informal Discussion Session

December 12, 2018

### Members Present Representing

**Vice Chair:** Gary Napper  
**Public Managers’ Association**

**Executive Committee:**  
- Jon King  
  **Police Chiefs’ Association**  
- Ellen Leng  
  **Alameda-Contra Costa Medical Association**

- Michele Bell  
  **Air Medical Transportation Provider**

- Terence Carey  
  **Contra Costa Fire Chiefs’ Association**

- John Duggan  
  **Ambulance Providers (CC Contract)**

- Mark Forrette  
  **District II**

- Pat Frost  
  **EMS Agency Director**

- David Goldstein  
  **EMS Agency Medical Director**

- Elaina Petrucci Gunn  
  **American Heart Association**

- Cameron Metzger  
  **EMS Training Institution**

- Jason Vorhauer  
  **Contra Costa Office of the Sheriff**

### Members Absent Representing

**Chair:** Kacey Hansen  
**Trauma Center (CC Contract)**

- Jack Clapp  
  **Public Provider Field Paramedic**

- Ara Gregorian  
  **California Highway Patrol**

- James Lambert  
  **Hospital Council – East Bay**

- David Lilienstein  
  **Emergency Dept. Physicians (CC Receiving Hospital)**

- Jennifer Lucas  
  **American Heart Association**

- Denise Pangelinan  
  **Communications Center Managers’ Assoc.**

- David Samuelson  
  **Emergency Nurses Assoc. East Bay**

### Staff Present

- Rachel Morris  
  **Contra Costa County EMS**

- Lisa Vajgrt-Smith  
  **Contra Costa County EMS**

### Others Present

- Joanny All  
  **American Medical Response**

- Scott Newlin Jr  
  **American Medical Response**

- Rebecca Rozen  
  **Hospital Council of Northern and Central California**

## Agenda

1. **Introduction of Members and Guests**

2. **Approval of Minutes from June 13**
   
   A quorum was not achieved; minutes could not be approved at this meeting.

3. **Comments from the Public**
   
   No Comments

4. **Chair’s Report - Kacey Hansen, EMCC Chair**
   
   No Report

5. **Members’ Reports**
   
   No Reports

6. **Health Care Coalition Biannual Report to EMCC**

   EMS staff Lisa Vajgrt-Smith from Contra Costa EMS gave a biannual report on the Contra Costa Med-Health Preparedness Coalition (HPF Emergency Preparedness) activities. Covered what the coalition is and provided background on how the Coalition had requested that the EMCC be an overarching structure for the Coalition, and that the Coalition be allowed to pull in the EMCC when system gaps are identified in case of disaster. The biannual report is part of the oversight structure. The report highlights high level activities going on in the Coalition. Lisa went over this year’s main goals for Coalition, including dialysis center engagement. The report included an example of a ReddiNet report card and an overview of ReddiNet was given. Lisa gave an overview of the Contra Costa Medical Reserve Corps (MRC), which is a group of dedicated medical volunteers; the MRC went to the Mendocino Complex Fires and a small team went to the Camp Fire in Butte County – there
was a hand out in packet with more information. Lisa is working with Public Health to add partners to strengthen the Coalition.

7. Presentation: Sandy Hook Promise
   Ilana Israel Samuels, California Region Manager for Sandy Hook Promise (SHP) gave an overview of the program. The program’s impact in Contra Costa County is possible through the Contra Costa County Office of Education. The mission of SHP is to prevent gun violence and other forms of violence before they happen. There are four (4) Know The Signs programs: Say Something, Start With Hello, Safety Assessment & Intervention, and SOS Signs of Suicide. A description of each program was given and handouts were provided to the group.

8. EMCC Legislative Update
   No Update

9. Quarterly Update on Alliance Ambulance Services –Chief Carey, CCCFPD
   - Reported Fire personnel changes and updates: Fire Chief Lance Maples retiring from El Cerrito Fire Department as of December 31, 2018; Chief Pigoni to take his place. Fire Chief Jeff Carman retiring from Contra Costa County Fire Protection District at the end of March 2019. Fire Chief Paige Meyer will continue as Fire Executive Chair.
   - May add more units as demand of flu season dictates - looking at spikes in calls. Working with AMR to manage.
   - Reported six months ago on a trial study looking at Bravo calls - looked to see if the proper resources were being allocated correctly to calls; good findings came from study.
   - Outliers - working with LEMSA staff on outliers.
   - APOT / wall times - working with Rebecca Rozen and the Hospital Council. There is a meeting next week with the LEMSA to share ideas.

10. Staff Report: New EMCC Membership Term; EMCC Annual (Draft) Report Action: Review/Approve for Submission to the Board of Supervisors
    - Staff Morris reported on the new membership for the 2018-2020 term. Twenty-one (21) out of twenty-four (24) seats have been filled. Vacant seats are the Contra Costa Health Services Behavioral Health (B13), Private Provider Field Paramedic (C4), and District 5 seat. Staff will continue to work on those appointments.
    - The 2018 EMCC Annual (draft) Report could not be approved for submission to the Board of Supervisors as a quorum was not achieved. Staff Morris will find out and report how to proceed.

11. EMS Medical Director’s Report – David Goldstein, Contra Costa EMS Medical Director
    In process of adding pain control medications to optional scope. In 2020 treatment protocols, expect to add medications in, some for adult and some for pediatric - will consult fire agency medical directors. Ketamine should be a net positive to the system but will require a good amount of training.

12. Health Information Exchange (HIE) Update – Pat Frost, Contra Costa EMS Director
    Member Frost gave an update on EMS system efforts regarding HIE (update handout in packet). A plan was developed four to five years ago; does not require any providers to buy into a new system. Because EPIC is used in almost all hospitals, the goal is to find opportunities to connect with interfaces on the backend.

13. EMS Director’s Report – Pat Frost, Contra Costa EMS Director
    - Spent last twelve (12) months in front of finance committee to request additional funding for EMS system - after a lot of education and information sharing, approved by finance committee that EMS system would receive half million dollars additional funding to continue already existing functions. Member Frost will be going to the Board of Supervisors on Tuesday December 18 in hopes to gain support for funding. The system is at the point where future funding is limited - as part of this effort, also in packet is a proposal - thinks additional funding will be approved with approval for County to explore another kind of Measure H regulation. LEMSA has maximized what we can do with increased fees.
    - Ambulance ordinance: LEMSA received draft copy from County Counsel. LEMSA staff is reviewing draft language. A special meeting can be called with the EMCC executive committee and membership once the review is complete and an executive summary drafted. Timeline for next steps is early 2019.
    - Finished ePolst pilot report.
    - No new information on closure of Alta Bates.
    - Hopes for sobering center did not come to fruition – no agreed upon location could be selected.

14. Proposed agenda items for March 13, 2019 meeting: Approval of June draft minutes

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<td>E 2</td>
<td>Ex Officio</td>
<td>David Goldstein</td>
<td>Present</td>
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**Advisory Body + Brown Act done**

Meeting Attendance Requirements per the Bylaws:

A. EMCC members shall attend EMCC meetings.
B. A member who cannot attend a meeting must notify the Chair and may have one excused absence in a twelve month period.
C. Whenever a member does not attend two regularly scheduled meetings, within a rolling twelve month period, complete their Brown Act requirements or fails to meet the criteria for sitting on the advisory body the EMS Agency shall notify the nominating agency/organization of the absences and request appropriate action.
D. Members must complete the required Ethics and Brown Act training provided by the County within three months of appointment and submit the “Training Certification for Member of County Advisory Body” form to EMS staff prior to participating at any meeting.
E. Members who do not complete the Ethics and Brown Act training within 3 months may not further participate until the requirement is fulfilled.
F. Ethics and Brown Act training is recommended to be completed every two years while serving on a County Advisory Committee.
Advisory Body Name: Emergency Medical Care Committee (EMCC)
Advisory Body Meeting Time/Location: 4:00 p.m. - 5:30 p.m. on the second Wednesday of March, June, September, and December, unless otherwise noted. Meetings are held at various locations in Contra Costa County.
Chair: Kacey Hansen (December 2015 – present)
Staff Person: Rachel Morris (January 2017 – Present), Health Services, Emergency Medical Services
Reporting Period: January 1, 2018 – December 31, 2018

I. Activities:
The EMCC, over four (4) regular meetings in the past year, was involved in or kept its membership informed about the following EMS System issues:

- Received reports on Alliance Service Delivery Model implementation and EMS system benefits.
- Local EMS Agency (LEMSA) establishes optional scope for use of epinephrine and narcan in first responder BLS protocols. Once established, new protocols created an opportunity for all BLS fire first responder agencies to use.
- EMCC informed on process to update the county ambulance ordinance. Draft ambulance ordinance review by County Counsel completed as of December 2018. Informal stakeholder discussion planned through January 2019 prior to submission for BOS public hearing and approval. Updates in ordinance are focused on non-emergency ambulance services and public safety, and integration of emergency and non-emergency transport providers in mass casualty and disaster events.
- LEMSA participation with CCHS Public Health Department on a county marijuana ordinance and anticipated increased volume and child safety impacts of legalization on EMS System.
- EMS System stakeholders advised of new EMSA ePCR (electronic patient care record) and HIE (health information exchange) requirements to support bi-directional exchange between EMS and hospitals. In January 2018 CCEMS EMS System advisory letter sent to hospitals and EMS providers to prepare to participate for bi-directional exchange.
- The Board of Supervisors recognized May 20-26th 2018 as National EMS Week, and May 23rd as EMS for Children Day.
- EMCC advised of marked reductions in Hospital Preparedness Program Grant funding and continued unfunded state regulations and mandates.
- EMCC informed of status of potential closure of Alta Bates Hospital, Alameda County and City of Berkeley workgroup, and concerns of impact to West County.
- EMCC provided updates on EMS service delivery in West County remains stable with Lifelong Urgent Care filling the gap for non-emergency care with support of CCHS nurse call lines, and high walk-in volume at Kaiser Richmond ED.
- LEMSA HIE and EPIC workgroups and strategies to connect prehospital care records with emergency department patient records in the hospital using EPIC Care Everywhere. LEMSA implementing upgrades of FirstWatch data platform - to include enhanced analytics to improve medical oversight and utilization reporting.
- EMSA released a publication for strategy and data collection evaluation and quality: recent legislation requires EMS will be a conduit for registries, POLST, Stroke registry and others in terms of providing information to the state.
- ePOLST Program: LEMSA and Alliance participating as pilot partners of EMSA ePOLST registry in collaboration with Alameda and Contra Costa Medical Association (ACCMA).
- Contra Costa EMS System was selected to pilot improvements in California Stroke Registry and Stroke system as part of CMS grant with Stanford Health Services.
- On October 24th, EMS hosted the 3rd annual Contra Costa County Survivors Reunion Luncheon to show tangible continuum of care, and where survivors meet their rescuers.
- Treatment guidelines and policies updated towards the end of a year are mostly finished for sending out for public comment. Implementation is January 1st, 2019.
- Measure H funds distributed to support Fire Service EMS Medical Director and ePCR server to assure Fire paramedic program compliance with EMSA quality, training and data reporting requirements.
- Recognized Prehospital Care Coordinator Bruce Kenagy from the Contra Costa EMS Agency for his many years of service to the Contra Costa County EMS system. Bruce retired in March of 2018.
- The LEMSA along with other Contra Costa County divisions, stakeholders and outside agencies, all worked together during the July 2018 Mendocino Complex Fires event.
- EMCC members approved serving as the reporting and advisory entity for the Contra Costa Med-Health Coalition to
comply with new Hospital Preparedness Program (HPP) program requirements.

- EMS Authority denied RFP and EMS system plan, alleging LEMSA did not hold fair competitive process; EMCC informed of County decision to appeal.
- EMCC briefed regarding continued adverse impacts on 9-1-1 ambulance providers and patient care associated with prolonged ambulance patient offload delays (APOT).
- EMCC informed of LEMSA reports to Board of Supervisor Finance Committee addressing needs for new EMS System funding to support continuity of operations.
- EMCC briefed as to Medical Reserve Corps and Disaster deployments of ambulance strike teams and fire mutual aid associated with Wildfires associated with Mendocino Fires in August 2018 and Camp Fire in November 2018.
- EMCC briefed on updates associated with Contra Costa Community College Paramedic Program Development.

II. Accomplishments

- Approval of EMCC 2017 Annual Report.
- LEMSA recognized with the Mission Lifeline: Gold Plus Award for their STEMI system, along with AMR Concord, CCCFPD, ECCFPD, El Cerrito Fire Department, MOFD, Pinole Fire Department, Richmond Fire Department, Rodeo-Hercules Fire District, SRVFPD.
- Released updated MCI plan through combined efforts from stakeholders over the last three (3) years.
- Alliance launch first Countywide Paramedic Advance Life Support Inter-facility Transfer (ALS-IFT) Program on March 6, 2018.
- Introduced successful CPR-HD (Highly Defined) pilot. The pilot concluded at the end of July 2018. Effective Jan 1 2019, all providers will be using the CPR-HD method.
- LEMSA worked with the Hospital Council to create a ReddiNet report card and have been distributing it monthly.
- LEMSA moves to new location consolidating EMS System Medical Health/Medical Reserve Corps disaster operations, EMT/EMS stakeholder program training and meeting facilities in one location.

III. Attendance/Representation

The EMCC is a multidisciplinary committee with membership consisting of representation of specific EMS stakeholder groups and organizations plus one (1) consumer member nominated by each Board of Supervisor member. This year there was a high number of retirements resulting in several resignations of member seats mid-term. At the end of the 2016-2018 term on September 30, 2018, there were fifteen (15) filled member seats on the EMCC; nine (9) seats were unfilled. Starting the new 2018-2020 term, there are twenty-one (21) filled member seats and three (3) unfilled member seats. A quorum was achieved at two (2) of the four (4) EMCC meetings in 2018.

IV. Training/Certification

Each EMCC representative was given a copy of the Advisory Body Handbook and copies of the “The Brown Act and Better Government Ordinance - What you need to know as a Commission, Board or Committee Member” and “Ethics Orientation for County Officials” videotapes during their two (2) year term. Responsibilities of County Boards were discussed including the responsibility to view the videotapes and submit signed certifications. For the 2016-2018 term, certification forms have been received from thirteen (13) of the fifteen (15) representatives.

V. Proposed Work Plan/Objectives for Next Year

Report to the local EMS Agency and to the Board of Supervisors as appropriate its observations and recommendations relative to its review of:

- Continue to support and foster Alliance/EMS partnerships to enhance efficiencies and workflows supporting EMS System improvement.
- Explore opportunities and efforts to procure sustainable funding for EMS System emergency communications, dispatch and data infrastructure enhancements to optimize patient care in day to day and disaster conditions.
- Promote and sustain Medical Health Disaster Coalition preparedness and engagement throughout EMS System in accordance with CMS Emergency Preparedness provider requirements.
- Engage stakeholders in supporting Medical Reserve Corps’ capability for children and special needs populations.
- Establish stakeholder group to update of County EMS for Children (EMSC) program system of care enhancements.
- Approve new county ambulance ordinance.
• Manage, update and submit to the State EMS Authority the 2018 EMS System Plan, Quality, Trauma, Stroke, STEMI and EMS for Children programs.
• Continue to monitor and report on EMS System impacts due to changing economics and health care reform.
• Receive 2018 Annual EMS System performance report.
• Support exploration on innovative models of EMS service delivery with hospital community.
• Support emergency ambulance provider and community hospitals efforts to reduce patient transfer of care extended delays that impact the availability of ambulances for the next 9-1-1 call.
• Support EMS System program (STEMI, Stroke, Cardiac Arrest, EMSC, Quality/Patient Safety and Trauma) initiatives.
• Continue to support and sustain community education and outreach, e.g. HeartSafe, Child Injury Prevention.
• Support appropriate use of 9-1-1, CPR Anytime, and Automatic External Defibrillator (AED) programs through partnerships with law enforcement, CERT, fire first responders and community coalitions.
• Hold 4th Annual Contra Costa Survivors Reunion.
• Continue to monitor West County EMS System associated with closure of Doctors Medical Center and pending closure of Alta Bates Summit.
• Establish regular governance reporting for the Contra Costa Med/Health Coalition as required by the Contra Costa Med/Health Coalition Charter.
• Receive updates on status of Community Paramedic and EMT training programs.
• Receive updates on treatment guidelines and policies for 2019.
• Receive updates on EMS Quality Partnership tool “First Pass” supporting enhanced provider level compliance associated with prehospital patient care workflows.
## 2018 Emergency Medical Services (EMS) System Plan

### System Plan SMART² Objectives

#### Progress from Last Reporting Period

<table>
<thead>
<tr>
<th>No.</th>
<th>Standard</th>
<th>Meets State Standard</th>
<th>FY 2017–2018 Objectives</th>
<th>Progress to Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.06</td>
<td>Annual system Plan Update</td>
<td>Yes</td>
<td>Annual EMS System Update to State EMS Authority (EMSA)</td>
<td>Progress to Date: Met update due annually</td>
</tr>
<tr>
<td>1.07</td>
<td>Trauma Planning</td>
<td>Yes</td>
<td>Annual Trauma System Status Report.</td>
<td>Progress to Date: Met Update due annually.</td>
</tr>
<tr>
<td>1.08</td>
<td>ALS Planning</td>
<td>Yes</td>
<td>EMS system integration of emergency ambulance services</td>
<td>Progress to Date: Met Update provided annually</td>
</tr>
<tr>
<td>1.10</td>
<td>Special Populations</td>
<td>Yes</td>
<td>Exploration of alternative delivery models to match patient need to resource.</td>
<td>Progress to Date: In Progress 1-5 years. Engaged with Contra Costa Health Services and local Health System partners to explore opportunities.</td>
</tr>
<tr>
<td>1.11</td>
<td>System Participants</td>
<td>Yes</td>
<td>Stakeholder participation in update, approval and implementation of new ambulance ordinance</td>
<td>Progress to Date: In Progress Ordinance review by EMCC and BOS with implementation within next 12 months</td>
</tr>
<tr>
<td>1.13</td>
<td>Coordination</td>
<td>Yes</td>
<td>Exploration of coordination of EMS Dispatch Centers with Nurse Call centers to support appropriate use of 9-1-1 or specialty dispatch and triage call centers</td>
<td>Progress to Date: Not started Continue to support and engage stakeholders within 1-5 years</td>
</tr>
<tr>
<td></td>
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<td>Annually evaluate all patient care based on evidence-based care optimizing patient benefit and patient safety. Implement First Pass analytics for support CQI efforts.</td>
<td>Progress to Date: Ongoing Annually. Continue to enhance systems of care policies and practices to support improved patient outcomes.</td>
</tr>
</tbody>
</table>

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1 Approved by the EMCC on XXXX  
2 SMART: Specific, Measurable, Achievable, Realistic and Timely
<table>
<thead>
<tr>
<th>No.</th>
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<tbody>
<tr>
<td>1.16</td>
<td>System Finances</td>
<td>Yes</td>
<td>Annually review of costs and fees to support sustainable EMS System and EMS Agency oversight and operations.</td>
<td>&lt;br&gt;<strong>Progress to Date</strong>: Ongoing  Monitor and manage current funding effectively to support sustainable programs and activities. Update annual ambulance payor mix report</td>
</tr>
<tr>
<td>1.20</td>
<td>DNR (Do Not Resuscitate)</td>
<td>Yes</td>
<td>Pilot site for (POLST) registry with EMS System Stakeholders over 12 months.</td>
<td>&lt;br&gt;<strong>Progress to Date</strong>: Met  Member of POLST Conversation Project within county. Pilot project completed December of 2018.</td>
</tr>
<tr>
<td>1.27</td>
<td>Pediatric Emergency Medical and Critical Care System</td>
<td>Yes</td>
<td>Pediatric EMS for Children (EMSC) System Program Plan update and regulation implementation within 1-5 years.</td>
<td>&lt;br&gt;<strong>Progress to Date</strong>: In progress.  State EMSC regulations not final. Active on EMSC Technically Advisory Committee. Complete update of EMSC Program within 24 months.</td>
</tr>
<tr>
<td>1.28</td>
<td>Exclusive Operating Area (EOA)</td>
<td>Yes</td>
<td>Update of county ambulance ordinance within 12-18 months. Review of EOA IV 224 status to determine ambulance exclusivity eligibility. EOA I, II and V in appeals.</td>
<td>&lt;br&gt;<strong>Progress to Date</strong>: In progress.  Ambulance ordinance update in progress. ERA IV 224 status exploration in progress. EOA I, II and V in appeals</td>
</tr>
<tr>
<td>2.01</td>
<td>Local EMS Agency Staffing and Assessment of Needs</td>
<td>Yes</td>
<td>EMS System Study and Modernization Project review of LEMSA staffing needs and workflows to support statutory requirements every 2 years.</td>
<td>&lt;br&gt;<strong>Progress to Date</strong>: Ongoing.  Re-align LEMSA staffing in line with required statutory functions, quality and medical oversight.</td>
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<tr>
<td>2.04</td>
<td>Dispatch Training</td>
<td>Yes</td>
<td>Promote support high quality Emergency Medical Dispatch (EMD) dispatcher training and performance consistent for Center of Excellence Accreditation within 3-5 years.</td>
<td>&lt;br&gt;<strong>Progress to Date</strong>: Ongoing.  Dispatch medical oversight policies consistent with Center of Excellence national standards. EMS procurement supports unified and accredited dispatch.</td>
</tr>
<tr>
<td>2.06</td>
<td>Response</td>
<td>Yes</td>
<td>Contra Costa EMS (CCEMS) continues ongoing evaluation of sustainability of EMS System partners based on safety, funding and opportunities for health care reimbursement. Annual review</td>
<td>&lt;br&gt;<strong>Progress to Date</strong>: Ongoing.  Annual review and monitoring coordinated response of ambulance and first responders. Continuing to evaluate impacts to EMS associated with hospital and fire station closures</td>
</tr>
<tr>
<td>2.12</td>
<td>Early Defibrillation</td>
<td>Yes</td>
<td>Continued expansion of public access Automated External Defibrillation (AED) and Law AED programs with integration into dispatch. Review and update annually</td>
<td>&lt;br&gt;<strong>Progress to Date</strong>: Ongoing.  Continue to engage community first responders and citizen responders. Using CodeSTAT, CARES, AED registry, PAD and Public training.</td>
</tr>
<tr>
<td>No.</td>
<td>Standard</td>
<td>Meets State Standard</td>
<td>FY 2017-2018 Objectives</td>
<td>Progress to Date</td>
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<tr>
<td>5.06</td>
<td>Hospital Evacuation Plan</td>
<td>Yes</td>
<td>Update medical surge and transportation plans for hospitals incorporating standardized training with HICS for all hospital facilities with opportunities for integration of first responders with hospital leadership and incident commanders.</td>
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<td><strong>Progress to date:</strong> <strong>In progress</strong>  Working with Public Health and Health Care Coalition to review and update. Update of MCI plan completed and Pediatric Surge Toolkit still in progress.</td>
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</tr>
<tr>
<td>5.10</td>
<td>Pediatric Emergency and Critical Care System</td>
<td>Yes</td>
<td>Continued networking with pediatric emergency care advocates throughout the local, regional and state EMS systems supporting pediatric emergency care best practices.</td>
<td><strong>Progress to date:</strong> <strong>Ongoing</strong>  CCEMS and Alameda County (ALCO) EMS have collaborative program of active advocacy for emergency preparedness for children.</td>
</tr>
<tr>
<td>5.13</td>
<td>Specialty System Design</td>
<td>Yes</td>
<td>Annual Stroke, STEMI, Trauma and Cardiac Arrest System Evaluation. Exploring partnerships with Contra Costa Health services to reduce 5150 and support appropriate use of sobering centers.</td>
<td><strong>Progress to date:</strong> <strong>Ongoing</strong>  Continuous CQI program &amp; participation in California Stroke Registry, Cardiac Arrest Registry for Enhanced Survival (CARES), Trauma Registry and California EMS Information System (CEMSIS).</td>
</tr>
<tr>
<td>5.14</td>
<td>Public Input</td>
<td>Yes</td>
<td>Active program of engagement with public including quarterly Emergency Medical Care Committee (EMCC) meetings. EMCC bylaw update</td>
<td><strong>Progress to date:</strong> <strong>Ongoing</strong>  Public and EMCC comment to be included as part of ambulance ordinance review and update process.</td>
</tr>
<tr>
<td>6.01</td>
<td>QA/QI Program</td>
<td>Yes</td>
<td>Monthly “live stories” public reporting EMS Hospital transfer of care never event monitoring. Implementation of Quality Review Team (QRT) for review of event reports concerning clinical care concerns.</td>
<td><strong>Progress to date:</strong> <strong>Ongoing</strong>  Hospitals public reporting continues. Implementation of first pass tool launch planned support provider level improvement by December 2020.</td>
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<tr>
<td>7.01</td>
<td>Public Education</td>
<td>Yes</td>
<td>Expansion of HeartSafe Communities to include support for CPR, Public Access Defibrillation (PAD), Heart Attack, Stroke and Healthy Lifestyle.</td>
<td><strong>Progress to date:</strong> <strong>Ongoing</strong>  Continue countywide expansion of outreach in progress.</td>
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<tr>
<td>7.03</td>
<td>Disaster Preparedness Promotion</td>
<td>Yes</td>
<td>Annual advocacy and implementation of regional pediatric medical surge planning. Develop policies and work with stakeholders for implementation and use of BLS providers to backup 911 system in surge</td>
<td><strong>Progress to date:</strong> <strong>Ongoing</strong>  CCEMS participating in National, regional and statewide efforts supporting Med/Health Preparedness.</td>
</tr>
<tr>
<td>No.</td>
<td>Standard</td>
<td>Meets State Standard</td>
<td>FY 2017-2018 Objectives</td>
<td>Progress to Date</td>
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<tr>
<td>8.13</td>
<td>Disaster Medical Response</td>
<td>Yes</td>
<td>Sustain Contra Costa Medical Reserve Corp and demonstrate effective deployment Medical Reserve Corps (MRC) for medical health response as needed.</td>
<td><strong>Progress to date: Ongoing</strong>  Update of MRC program and deployment processes in progress.</td>
</tr>
<tr>
<td>8.15</td>
<td>Interhospital Communications</td>
<td>Yes</td>
<td>Address ongoing gaps in emergency communications e.g. ReddiNet, evaluate emergency communication tools and apps. Identify and address gaps in East Bay Regional Communications System (EBRCS) hospital radio system.</td>
<td><strong>Progress to date: Ongoing</strong>  Annually monitor, exercise support and upgrade as fiscally able inter-hospital communications. Hospital report cards in place</td>
</tr>
<tr>
<td>8.18</td>
<td>Enhanced Level: Specialty Care Systems</td>
<td>Yes</td>
<td>Update of new state regulations for specialty care systems e.g. Trauma, ST Elevation Myocardial Infarction (STEMI), Stroke, EMSC.</td>
<td><strong>Progress to date: Ongoing</strong>  Annually involved in the development through EMSAAC</td>
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## 2018 TIMELINE & ACTIONS TO BE ADDRESSED

All State standards have been met. We plan to address or reassess the following SMART objectives.

<table>
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<tr>
<td>1.06</td>
<td>Annual System Plan Update</td>
<td>Yes</td>
<td>Update Annually.</td>
<td>Annually</td>
</tr>
<tr>
<td>1.08</td>
<td>ALS Planning</td>
<td>Yes</td>
<td>Support successful ambulance provider transition and monitor for system gaps</td>
<td>Annually</td>
</tr>
<tr>
<td>1.10</td>
<td>Special Populations</td>
<td>Yes</td>
<td>Exploration of alternative delivery models to match patient need to resource.</td>
<td>Annually</td>
</tr>
<tr>
<td>1.11</td>
<td>System Participants</td>
<td>Yes</td>
<td>Stakeholder participation in implementation of ambulance ordinance.</td>
<td>1-2 years</td>
</tr>
<tr>
<td>1.13</td>
<td>Coordination</td>
<td>Yes</td>
<td>Exploration of EMS dispatch services, exploration of coordination with Nurse Call centers to support appropriate utilization of 9-1-1 services.</td>
<td>1-5 years</td>
</tr>
<tr>
<td>1.14</td>
<td>Policy and Procedure Manual</td>
<td>Yes</td>
<td>Update of prehospital care policies and procedures based on prehospital evidence-based care. Implementation of new American Heart Association Guidelines for ALS.</td>
<td>Annually</td>
</tr>
<tr>
<td>1.16</td>
<td>System Finances</td>
<td>Yes</td>
<td>Review of fees and costs to support sustainable delivery of EMS services.</td>
<td>Annually</td>
</tr>
<tr>
<td>1.20</td>
<td>Do Not Resuscitate (DNR)</td>
<td>Yes</td>
<td>Evaluate EMS Pilot of POLST registry project</td>
<td>Dec 2018</td>
</tr>
<tr>
<td>1.27</td>
<td>Pediatric Emergency Medical and Critical Care System</td>
<td>Yes</td>
<td>Update of Pediatric EMSC plan and future implementation of State Pediatric EMSC System of Care regulations.</td>
<td>3 years</td>
</tr>
<tr>
<td>1.28</td>
<td>Exclusive Operating Area</td>
<td>Yes</td>
<td>Re-evaluation EOA IV (San Ramon Fire Protection District) exclusivity</td>
<td>1 year</td>
</tr>
<tr>
<td>2.01</td>
<td>Local EMS Agency Staffing and Assessment of Needs</td>
<td>Yes</td>
<td>Annual review of EMS Staffing needs and workflows to support statutory requirements.</td>
<td>Annually</td>
</tr>
<tr>
<td>2.04</td>
<td>Dispatch Training</td>
<td>Yes</td>
<td>Support high quality EMD and dispatcher training for Center of Excellence Accreditation.</td>
<td>Annually</td>
</tr>
<tr>
<td>2.12</td>
<td>Early Defibrillation</td>
<td>Yes</td>
<td>Expand and enhance Public Access AED and Law AED programs within fiscal resources</td>
<td>Annually</td>
</tr>
<tr>
<td>5.06</td>
<td>Hospital Evacuation Plan</td>
<td>Yes</td>
<td>Update of medical surge and transportation plans for hospitals.</td>
<td>1-3 years</td>
</tr>
<tr>
<td>5.08</td>
<td>Trauma Planning</td>
<td>Yes</td>
<td>Update of trauma plan.</td>
<td>Annually</td>
</tr>
<tr>
<td>5.10</td>
<td>Pediatric Emergency and Critical Care System</td>
<td>Yes</td>
<td>Continued networking with pediatric emergency care advocates throughout the local, regional and state EMS systems supporting pediatric emergency care best practices.</td>
<td>Annually</td>
</tr>
<tr>
<td>No.</td>
<td>Standard</td>
<td>Meets State Standard</td>
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<tr>
<td>5.13</td>
<td>Specialty System Design</td>
<td>Yes</td>
<td>Stroke, STEMI, Cardiac Arrest, Trauma, EMS for Children System Program Evaluation.</td>
<td>Annually</td>
</tr>
<tr>
<td>5.14</td>
<td>Public Input</td>
<td>Yes</td>
<td>Support EMCC engagement on EMS system issues</td>
<td>Annually</td>
</tr>
<tr>
<td>6.01</td>
<td>Quality Assurance (QA) /Quality Improvement (QI) Program</td>
<td>Yes</td>
<td>Evaluate EMS-Hospital data system integration supporting patient safety and prehospital care. Develop Health Information Exchange between EMS ePCR and EPIC (hospital medical record platform)</td>
<td>1-4 years</td>
</tr>
<tr>
<td>7.01</td>
<td>Public Education</td>
<td>Yes</td>
<td>Sustain HeartSafe Communities to include support for CPR, PAD, Heart Attack, Stroke and Healthy Lifestyle.</td>
<td>Annually</td>
</tr>
<tr>
<td>7.03</td>
<td>Disaster Preparedness Promotion</td>
<td>Yes</td>
<td>Continued advocacy and implementation of regional pediatric medical surge planning. Participation on statewide Pediatric Surge Plan Workgroup</td>
<td>1-2 yrs</td>
</tr>
<tr>
<td>8.13</td>
<td>Disaster Medical Response</td>
<td>Yes</td>
<td>Sustain development and recruitment of Contra Costa Medical Reserve Corp volunteers. Effective MRC capability for medical health deployment as needed.</td>
<td>Annually</td>
</tr>
<tr>
<td>8.15</td>
<td>Interhospital Communications</td>
<td>Yes</td>
<td>Address ongoing gaps and improvement opportunities for ReddiNet platform to support reliable use by hospitals. Routinely exercise med/health emergency communications</td>
<td>Annually</td>
</tr>
<tr>
<td>8.18</td>
<td>Enhanced Level: Specialty Care Systems</td>
<td>Yes</td>
<td>Evaluate new regulations for specialty care system implementation when complete e.g. STEMI, Stroke, EMS for Children.</td>
<td>1-2 years</td>
</tr>
</tbody>
</table>
On February 28, 2019 Supervisor Gioia and I presented an update to the West County Mayors on West County EMS System Services. The following is a summary of the key changes and impacts to EMS services since the closure of Doctor's Medical Center (DMC) in 2015. At the time of DMC closure the hospital had 25 emergency department stations (beds); saw approximately 130 emergency department patients per day 22 who arrived by 911 ambulance services. DMC was both a primary stroke center and a high risk heart attack (STEMI) center prior to closure. The cities of Richmond and San Pablo have been more affected than other cities that were not as close to DMC. DMC served that local community in many ways in addition to providing EMS Services.

Contra Costa EMS System had time to pre-plan with EMS, non-emergency and hospital and health care system prior to the closure of DMC. EMS Agency continues to monitor services and impact to this day to assure the community is provided high quality 911 ambulance services.

**Impact on Community and Ambulance Services:**
- Out of county EMS traffic before DMC 10% after 30%. An increase of 20%
- Major EMS destination changes occurred when DMC closed to ambulance traffic in 2014. Currently Kaiser Richmond sees 45% CCRMC 19-22% Alta Bates 12-13% Summit 3%
- No changes in the percent of patients transported to hospital code 3 lights and siren are unchanged. Same as other parts of the county
- Most EMS transports continue to serve 911 patients that are not unstable.
• Richmond Kaiser sees 180-200 patients per day. 15-18% by EMS per day
  Increased wall time is a countywide problem
• Travel times increased especially for those in Richmond and San Pablo (10 minute to 25-28 minutes on average)
• Average time to definitive care in west county 28-40 minutes (2 minutes more than Central Contra Costa or East County)
• Added several million dollars of ambulance services due to out of county transport volume

**Bed Capacity:** Kaiser Richmond added 13 beds, Contra Costa Regional has added 8. County wide there the EMS system has 2 beds less than when DMC was opened.

**Alternative Urgent Care and Nurse Call Centers:** Lifelong opened across from DMC and serves a significant number of non-emergent care patients from the local community. Contra Costa Health Services Ambulatory Care services were subsequently expanded to serve the community. Contra Costa Health Plan expanded nurse call and advice centers to serve health plan and non-health plan members.

**Specialty Care:** The community is served by Contra Costa, Alameda County and Solano have “mature” systems of care for Stroke, STEMI, Trauma and Cardiac Arrest.
  • 95% Primary Stroke patients go to Kaiser Richmond with the rest going to Kaiser Vallejo/Summit and Kaiser Oakland
  • High risk heart attack STEMI services benefit from 12 lead transmission system allowing early alert to destinations including Kaiser Vallejo/Summit/Kaiser Oakland/JMMC WC
  • Trauma services: West county services unchanged as DMC was not a designated trauma center. Current trauma destinations include Highland, JMMC WC and UCSF Benioff for Children

**West County use of Alta Bates:**
  • Reasons to go to Alta Bates: 68% patient choice most likely due to being Sutter patients. Remaining 911 transport volume go to Alta Bates due to most appropriate destination for the patient condition or specialty (OB)
The Alta Bates Impact Report (September 2018)
https://d3n8a8pro7vhmx.cloudfront.net/berkeleydistrict8/pages/181/attachments/original/1544125099/Alta_Bates_RHIA.pdf?1544125099 was released with the following information.

- As of 2016 Alta Bates Hospital saw 181 patients per day in their emergency department. 18% or approximately 32 patients a day were from West County zip codes. Of those 32 ten of those patients were brought in by EMS.
- There were limitations to the report that were not disclosed. The report did not routinely disclose raw numbers when reporting percentages. Increases in emergency department traffic or volume did not control for population growth. The report also did not distinguish between closure impacts vs chronic health system issues (over-crowding, wall times, use of ED for primary and urgent care)

EMS and Health System next steps/opportunities to enhance services.

- Intra-operability (aka health information exchange) between EMS and Hospital patient records so we as an EMS and Health Care community can better measure impacts and effectiveness of EMS services.
- Improved medical dispatch (consolidated dispatch) estimated by Chief Carman to improve response times by up to 1 minute.
- Options for alternative destination for non-acute EMS patients (requires changes in state law)
- Improved patient access to health care through telemedicine, patient early access to non-medical and non-EMS medical transportation
Health Information Technology for EMS (HITEMS)

**Project Status:** EMSA’s funding request was approved by Centers for Medical and Medicare Serves (CMS) on July 1, 2018 for $36 M with a 10% matching fund requirement

**Project Funding Period:** July 1, 2018 to September 30, 2021

**Match Requirement:** The grant requires a 10% match. EMSA has secured $1 Million from CARESTARE Foundation and continues to secure an additional $3 Million

**Grant Funding Request:** EMSA anticipates releasing a GFO for +EMS/SAFR in January of 2019
HITEMS Project Goals

1. +EMS SAFR Model
Design, development, and implement a interoperable system that EMS providers can on-board with hospitals, Medi-Cal providers, public health entities

2. On-Board Community Paramedic
Use query-based HIE to exchange care plans and enhanced the information available from the public health, social services, or behavioral health

3. ePOLST
Connect EMS Provider and hospitals to specialized end-of-life registries, such as POLST to allow patients wishes to be carried out for end-of-life decisions

4. PULSE
Build Full Statewide connectivity and access to PULSE to be used in a disaster

5. Data
Promote the use of data analytics and HIT to improve health care quality for Medicaid patients
Patient Unified Lookup System for Emergencies (PULSE)

• Idea/concept originated from experiences during Hurricane Katrina

• April 2014 - ONC published a report that assessed opportunities in CA and Gulf Coast to use HIE to support Disaster preparedness and EMS.
  – 1) EMS data exchange with hospitals
  – 2) disaster response medical history portal (PULSE)

• May 2014 - ASPR and ONC received a $50,000 grant from HHS IDEA Lab to establish the core technical approach/requirements, scope of work and use cases (scenarios) for PULSE

• July 2015 - California EMSA received funding from ONC to design, build and implement PULSE
33 Local EMS Agencies (LEMSA)

California Regional EMS Agencies

- Central California
- Coastal Valley
- Inland Counties
- Mountain-Valley
- North Coast
- Northern California
- Sierra-Sacramento Valley

Single Counties
EMS Success in Orange County

- Newport Beach Fire Department
- Hoag Hospital
- Orange County Partnership Regional Health Information Organization (OCPRHIO)
- Orange County EMS Agency
Electronic Health Record Required for EMS Providers (ePCR):

*Device at Point-of-Service -- “Gurneyside”*

Required by California Health and Safety Code 1797.227
(Effective January 1, 2016)
Model for Use of Community HIO to Achieve “Real-Time”, bidirectional, Interoperable connectivity for EMS
Community Health Information Organizations (HIOs)

Regional Scope

- Authority on reliable patient identity
- Home of the most complete patient record
- Hub for efficient connection to the region’s hospitals, clinics, long-term care facilities, ancillary services, and public health resources
- Experts in connecting disparate systems using disparate standards
- Coordination for local governance, data quality, realizing priority use cases
California Trusted Exchange Network (CTEN) Statewide Scope

- Establishes trust among otherwise unaffiliated organizations
- Eliminates the need for point-to-point legal agreements through CalDURSA
- Coordinates consensus policies and standards for exchange
- Leverages the advantages of regional community HIO expertise and efficiency
- Preserves local autonomy, freedom to address local priorities and use cases
| S | SEARCH: | PARAMEDICS and EMTs may look up and display patient problem list, medications, allergies, POLST and DNR in field on ePCR screen | Improve clinical decision making  
Improve patient care |
|---|---|---|---|
| A | ALERT: | Display patient Information on hospital dashboard at ED to alert and share incoming patient information to assist in time-sensitive therapies | Improve decision support  
Better transitions of care  
Improve patient care |
| F | FILE: | Incorporate ePCR data into hospital EHR in HL7 format (using NEMSIS 3.4 CDA standards) | Build better longitudinal patient record |
| R | RECONCILE: | Receive patient disposition information from hospital EHR to add to EMS provider patient record | Improve population health |
# eOutcomes

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Anecdotal Benefits

- **Ambulance**
  - Better Patient Information
  - Save Time in completing EHR (ePCR)
  - Improved billing data

- **Hospital**
  - Receive accurate patient information earlier
  - Estimated cost savings to UCSD of $230,000/yr.
PULSE GOALs

• Deliver patient health information to healthcare professionals during a disaster
• Improve patient care
PULSE Steps

- Design
- Build
- Connect
- Implement
- Deploy
Patient Target Populations:

- Disaster victims who need medical treatment or medication refills
- All victims experiencing a medical or trauma emergency
- Displaced Victims of Disasters outside of their normal health system or geographic area of service
PULSE DESIGN

Providers Target Populations:

Healthcare professionals

Working in a:
- Mobile Field Hospital or Alternate Care site
- Medical Shelter
- EMS setting
California PULSE Pilot Design

- Emergency or Disaster Occurs
- Request is made to EMSA to Activate PULSE
- EMSA Activates PULSE through the PULSE Operator
- DHV Volunteer can log into PULSE from DHV System (single sign-on through DHV website)
- Access to patient information for 4 Health Information Organizations

- 6 types of Licensed Volunteers can log into PULSE when its activated by EMSA:
  1. Physician
  2. Nurse Practitioner
  3. Pharmacist
  4. Registered Nurse
  5. Physician’s Assistant
  6. EMT / Paramedic
PULSE BUILD

- Audacious Inquiry
- ONC Grant 2015-2017
- Scalable nationwide
- Portal built for access to **SEARCH** for patient health information during disaster situations
SEARCH for Patient
Required Fields: Name, Gender, DOB, (SS# or Address)

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CONNECT

Connect HIEs so that providers and emergency responders have a way to access health information across systems

- Respond to disasters
- Improve Clinical Decision Making
- Improve patient health and
- Measure outcomes

Interoperability
Next Steps Statewide Coverage

Current Connections
1. OCPRHIO
2. Santa Cruz HIE
3. Sutter Health
4. UC Davis Health
5. Sacvalley Medshare
6. Dignity Health

• Onboard Additional HIOs
• eHealth Exchange
• Carequality
Fall 2017 PULSE Implementation

- Roles & Responsibilities
- Develop Workflow
- Update Key Planning & Deployment Documents
- Communication
- Train end users
- Asset Request Process
- Deployment
## Return of Patient Encounters

### PULSE
Patient Unified Lookup System for Emergencies

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**Patient: Daisy ZZTEST GM**

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<td><strong>Emergency contact (Father)</strong></td>
<td>zztest, Father</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Contact info</strong></td>
<td>Tel: +1-999-777-8765</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Specific Medical Information

### Allergies

<table>
<thead>
<tr>
<th>Active Allergy</th>
<th>Reactions</th>
<th>Severity</th>
<th>Noted Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Ethoxyethanol</td>
<td></td>
<td></td>
<td>01/09/2018</td>
<td></td>
</tr>
<tr>
<td>A &amp; D</td>
<td>Anaphylaxis</td>
<td>High</td>
<td>01/09/2018</td>
<td></td>
</tr>
<tr>
<td>Bilberry</td>
<td>Cough</td>
<td>High</td>
<td>11/17/2017</td>
<td></td>
</tr>
<tr>
<td>Latex</td>
<td></td>
<td></td>
<td>01/09/2018</td>
<td></td>
</tr>
<tr>
<td>Hydrocodone-Acetaminophen</td>
<td></td>
<td></td>
<td>01/09/2018</td>
<td></td>
</tr>
<tr>
<td>Peanut-Containing Drug Products</td>
<td>Anaphylaxis</td>
<td>High</td>
<td>04/18/2017</td>
<td></td>
</tr>
</tbody>
</table>

### Current Medications

<table>
<thead>
<tr>
<th>Prescription</th>
<th>Sig.</th>
<th>Disp.</th>
<th>Refills</th>
<th>Start Date</th>
<th>End Date</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROAIR HFA 108 (90 Base) MCG/ACT Oral Inhaler</td>
<td></td>
<td></td>
<td></td>
<td>03/19/2018</td>
<td></td>
<td>Active</td>
</tr>
<tr>
<td>Indications: Asthma, unspecified asthma severity, unspecified whether complicated, unspecified whether persistent</td>
<td>inhal 2 Puffs by mouth every 4 to 6 hours as needed Shake well.</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>furosemide (LASIX) 80mg Tab</th>
<th>Take 1 Tab by mouth daily</th>
<th>30 Tab</th>
<th>03/19/2018 04/18/2018</th>
<th>Active</th>
</tr>
</thead>
</table>
First Activation of PULSE:
Wildfires Statewide
October through December 2017

- EMSA partnered with the Sequoia Project to increase Geographic Coverage for PULSE
- PLUSE established a temporary connection to eHealth Exchange
Both Kaiser and Sutter Hospital had to be evacuated in Sonoma County.
Second Activation of PULSE: July 2018 in Shasta and Lake County

EMSA partnered with Sequoia and CAHIE to onboard additional patient records for affected areas

- Sacvalley Medshare
- Dignity Health
July and August 2018 Wildfires

- Northern California Medical Reserve Corps (MRC) supported local medical and health operations at the shelter.
- Contra Costa County MRC provided care in Lake County

Nnorovirus outbreak at evacuation center
Third Activation of PULSE: November 2018 in Butte County

EMSA realized that use by medical personnel needed active deployment procedures.

EMSA deployed a 3 member team to initiate PULSE and train personnel.
Deploy PULSE

- Use in Camp Fire
- 13 Shelters
- Medical Component of Shelter
- EMSA sent team to initiate use

- CAL-MAT Team Members used PULSE for:
  - Patient History
  - Medical Refills
Just-In-Time Training

132 Medical Staff provided just in time training on PULSE deployed to Butte County

CALMAT, DHV, MRC’s Scripts Medical Team, California Air National Guard 143rd and 144th & California Army National Guard's 297th
Patient Info Lookup

Continuity of Care Document (CCD) Info:

• Problem List
• Medications
• Allergies
• Help with Treatment
• Medication Refills
Provisional PULSE Usage Data

- PULSE was deployed for 31 days to Butte County
- 13 Medical Alternate Care Facilities
- 132 health care personnel (health professionals) were trained to use PULSE
- 326 patient searches were done in PULSE for an estimated 39% usage rate
Top 5 Goals from Lessons Learned

1. Statewide Coverage for PULSE
2. Just-in-Time User Registration
3. Deployment Team
4. Stable Internet Connections
5. Sustainable Funding

- Consolidate all requested documents into a single report with provenance to improve review time
- Highlight within, or parse, C-CDA documents those data elements or fields most appropriate or more urgent for use in an emergency (most likely allergies, medications, problems, perhaps immunizations)
Next Steps

• Medi-Cal (Medicaid) 90/10 Funding provided for PULSE Phase II identify contributors for matching funds
• Expand Care Plan Exchange for Disaster response adding additional HIE/HIOs
• Onboard to eHealth Exchange & Carequality
• Expand Capabilities of PULSE
• Expand DHV users to include hospital and EMS staff
• PULSE will stay in active state and the access control will be with the DHV Single Sign On (SSO)
• Enhance Deployment Capabilities
Contact Information

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