



**County of Contra Costa
EMERGENCY MEDICAL SERVICES
Memorandum**

DATE: December 3, 2018

TO: FINANCE COMMITTEE
Supervisor Karen Mitchoff, District IV, Chair
Supervisor John Gioia, District I, Vice Chair

FROM: Patricia Frost, Director, Emergency Medical Services

SUBJECT: **Contra Costa EMS System Funding Report**

Information:

Referral History:

On March 19, 2017, the EMS Agency submitted a follow-up report on Community Service Area EM-1 (Measure H) and EMS System funding gaps. The report included two key recommendations to assure continuity of technology operations required to meet Title 22 EMS System program unfunded mandates supporting life-saving programs for Trauma, Cardiac Arrest, STEMI, Stroke and EMS for Children.

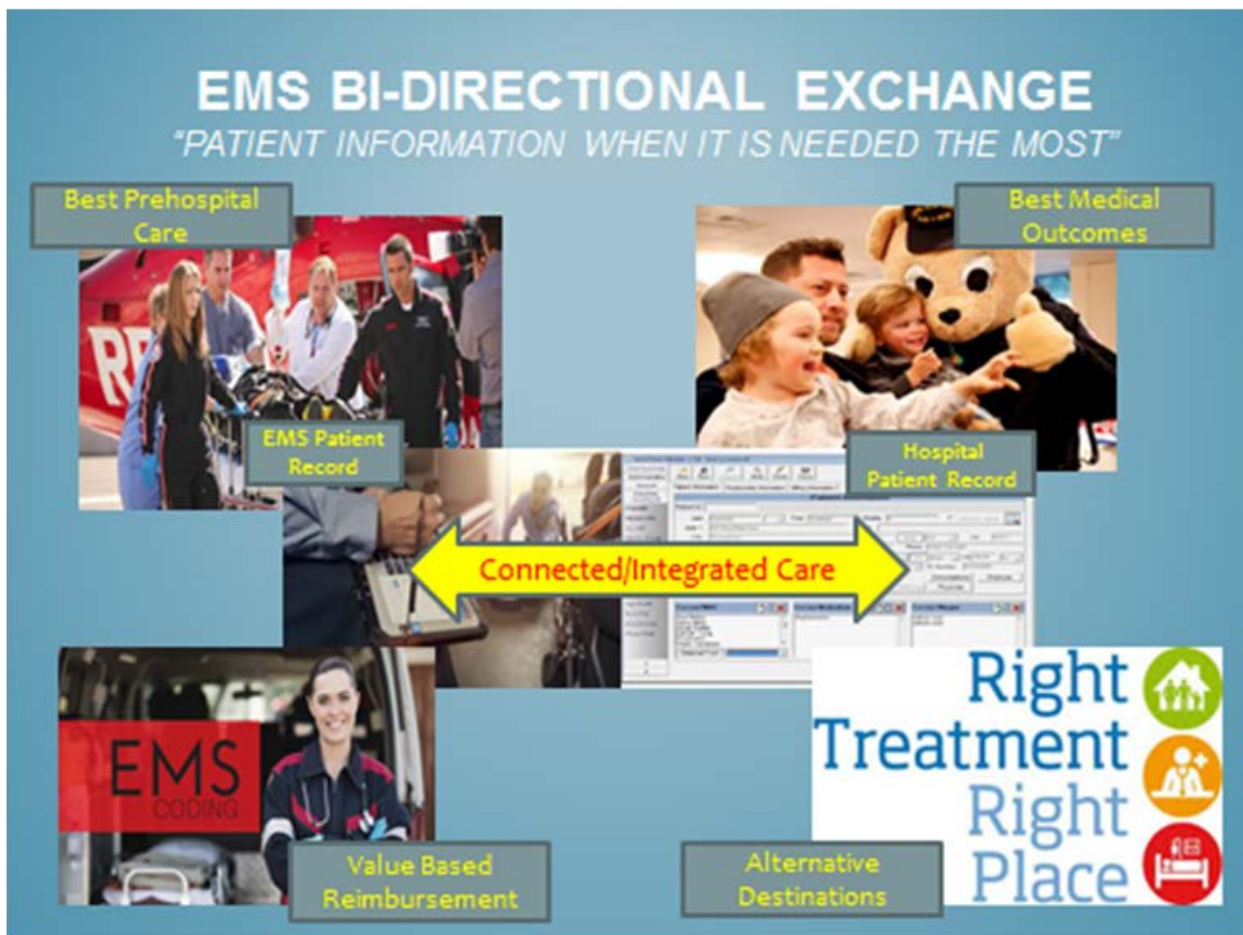
Recommendation #1: Establish an interim annual EMS System Program enhancement contribution/investment of up to \$750,000 ¹from available Board designated revenue sources until such time a new benefit assessment or other revenue source with a COLA could be established to support and enhance the Countywide EMS System.

Committee Response: The Finance committee approved general fund allocation of \$550,000.

Committee Update: The EMS Director was asked to provide clarifying information associated with the requirement for bi-directional exchange, current efforts to promote Countywide EMS System compliance with the requirement and an update on the State CMS grant to promote EMS bi-directional exchange. This information is summarized in the attached letter dated Oct 30, 2018 on EMS System Bi-directional Exchange Update to CCHS leadership at the request of Supervisor Mitchoff (as attached).

¹ In 2014 the Contra Costa EMS System Modernization Study identified the need for an additional \$750,000 to sustain Countywide EMS System of Care programs.

Bi-directional exchange is an EMSA state requirement of Local EMS Agencies to work with their EMS systems (fire, ambulance, hospital) to create an interoperable EMS patient electronic medical records exchange with receiving hospitals to improve patient care and save lives. Bi-directional capability allows EMS providers in tracking and preventing disruptions in patient care during disasters such as Hurricane Florence, wildfires and any emergency event where evacuation of health care facilities occurs. Bi-directional exchange has known benefits in other states where successful EMS-health care integrated systems support alternative destination to clinics, sobering centers and urgent care. Bi-directional exchange allows EMS Systems to partner “smarter” with the ability to alert the appropriate health care entity of that one of their patients had a 911 response regardless of if they were taken to an emergency room. The illustration below summarizes that capability.



On August 27, 2018 the EMS Agency with the assistance CAO leadership (Lisa Driscoll, Julie Enea and Paul Reyes) met with the Leadership for the Fire Executive Chiefs (Fire Chief Paige Meyer San Ramon Valley Fire Protection District and Fire Chief Lance Maples El Cerrito/ Kensington Fire District) to discuss a broad range of issues including bi-directional exchange and the state of Contra Costa EMS System funding. During the meeting the Fire Executive Chiefs acknowledged that they fully understood that bi-directional exchange was a state requirement there were fiscal matters associated with the long term costs to support bi-directional exchange for the county fire districts and expressed the need for more evidence that

the capability helped EMS personnel save lives. They advised that the fire districts were “cost adverse” and unwilling to take on new programs and projects even in response to state requirements when sustainable funding was not in place.

The EMS Agency was asked to provide information to the Fire Executive Chiefs on the experience of fire-based bi-directional exchange experiences in California and out of state. On September 10th the EMS Director provided Chief Meyer, Chief Maples and Chief Carman information obtained from San Diego Fire and Rescue on their real world experience.

San Diego County has the most mature, well-funded EMS bi-directional exchange system in California. The capability is being held out as a model by the State EMS Authority supporting opportunities for robust integration of services between health systems, county public services health and human services and public safety. In addition the immediate primary benefit for fire services providing ambulance services was in the area of timely and accurate billing that improved reimbursement and efficiency in billing. San Diego Fire stated it had significantly reduced the number of self-pay bills due to lack of payer information.

For those field level fire first responders and EMS ambulance personnel they reported that the “Search” function of bi-directional exchange offered paramedics critical information including allergies, current medications, patient history and that Fire-EMS responders now rely on that information to treat the patient.

Since then Fire Executive Chiefs Carmen, Meyer and Maples all jointly advised the EMS Director that they were not interested in participating in this round of the upcoming CMS grant.

Recommendation #2: Preserve and enhance the Fire First Responder funding by an additional 2 million dollars by moving forward by exploring a long term funding measure.

Committee Response: The Finance committee discussed long term EMS System funding needs and recommended working on the two year process to put a Special Tax on the June 2020 ballot. Chief Carman and EMS Director were directed to solicit input from stakeholders and Fire leadership.

Committee Update: During the August 27, 2018 EMS System sustainable funding was discussed. Chief Lance Maples and Chief Paige Meyer informed parties that the fire districts of the Rodeo Hercules, Pinole and East County had no interest in participating in a county wide EMS ballot measure due to their need to support their own ballot measure.

They also expressed dis-satisfaction with the population based re-alignment Measure H funding recommended by the CAO and approved by the Board of Supervisors in response to the economic downturn that was previously “engine-based”.

Subsequent to this meeting the EMS Director solicited some limited interest in enhancement of the EMS System associated with technology and equipment resources that would more directly demonstrate life-saving benefit. A letter was drafted on exploring a possible ballot measure directed at intra-operable data systems, public safety emergency communications and hi-tech

solutions including sustainable funding for EBRCS, First Net, WebEOC, Tablet Command, dispatch and numerous data system upgrades critical to EMS and public safety operations. A ballot measure benefiting Fire, EMS, Ambulance and Public Safety emergency and disaster technology to assure continuity of operations may be worthwhile to develop and explore. Letters of preliminary interest are attached to this report.

Summary:

Gaps in sustainable Emergency Medical Services funding threaten to degrade Contra Costa EMS System Services within the next 5 years with adverse impacts to all fire and ambulance stakeholders.

Although the economy has improved in the short term fiscal sustainability discussions are occurring at every fire district and with every private ambulance provider supporting emergency and non-emergency medical transportation services. At the Contra Costa Fire Protection District Directors Meeting on September 18th Chief Carman reported that the district is just “getting by” at this point in time and has yet to fully recover from the prior fiscal downturn.

Measure H funding is inadequate to provide for continuity of EMS System program operations, upgrades in technology infrastructure, and meet statutory requirements for EMT and paramedic oversight. Over the last 5 years increases in population growth have driven increased EMS service utilization. Expanded emergency and disaster operations have been tested and it is in the best interest of the county to establish an EMS System disaster contingency fund to assure sustainable funding streams.

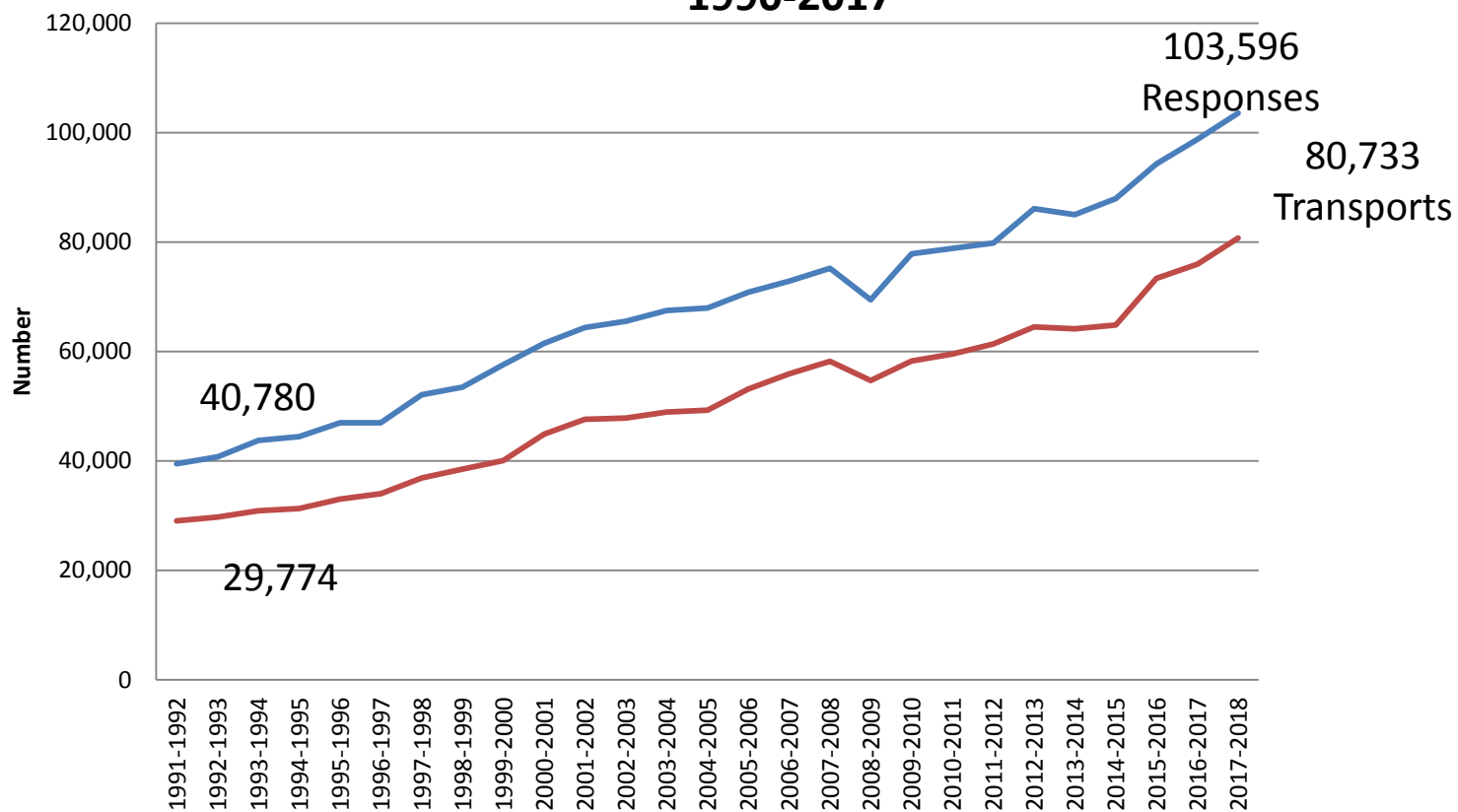
The Contra Costa EMS System is a high performance system with a level of medical complexity and patient volume that has increased 250% since Measure H was approved. The Local EMS Agency will require \$ 750,000 in additional funding per year to meet state and federal regulatory requirements to support fire agencies paramedic based EMS services.

Recent and upcoming salary increases approved by the Board of Supervisors are the key driver in EMS Agency personnel costs. The EMS Agency is constrained in its ability to achieve cost recovery and has exhausted its ability to raise fees and redesign internal operations through technology. Unlike other Local EMS Agencies in California, Contra Costa EMS Agency does not collect franchise or other first responder fees. In addition the EMS Agency has legacy of directing all ambulance contract performance penalties to support Fire-EMS stakeholders and EMS system improvement.

I would like to that the finance committee executive leadership for this year’s general fund allocation supporting regulatory compliance.

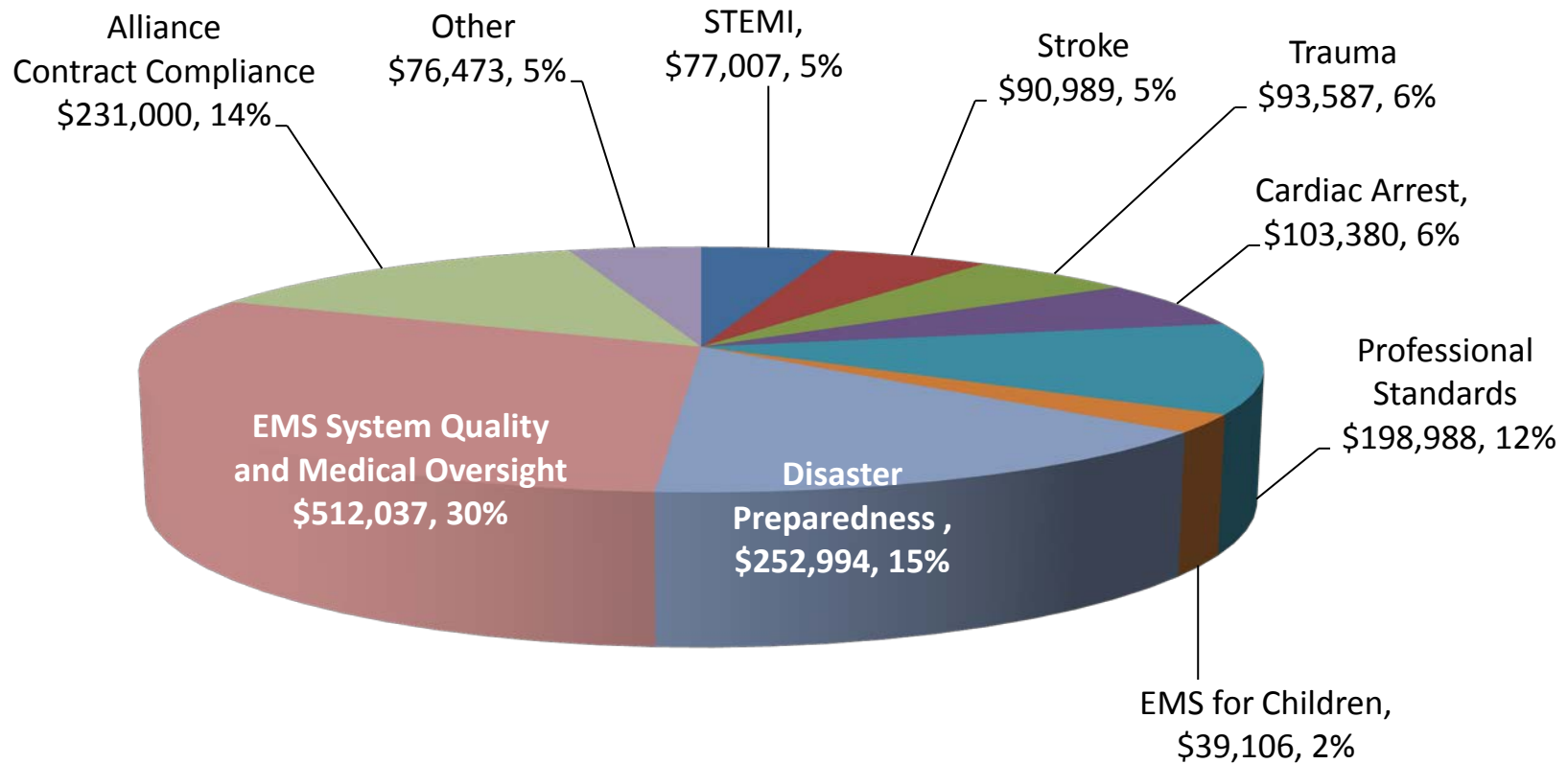


Contra Costa Emergency Medical Services EMS System Response and Transport Volume 1990-2017



Local EMS Agency cost of compliance with local, state and grant requirements for EMS Systems and Programs

**Contra Costa Emergency Medical Services
EMS System of Care and Paramedic Program Support*
FY 2017-2018 total \$1,675,560**



Local EMS Agency cost of compliance with local, state and grant requirements for EMS Systems and Programs

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HEALTH SERVICES DIRECTOR

PATRICIA FROST, RN, MS, PNP
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MEMORANDUM

TO: Anna M. Roth, RN, MS, MPH, Health Services Director
William B. Walker, MD, Director of Legislative and Governmental Affairs

FROM: Patricia Frost, RN, MS, PNP, Director of Emergency Medical Services

DATE: October 30, 2018

SUBJECT: EMS System Bi-directional Exchange Update

The California EMS Authority (EMSA) mandates¹ all Local EMS Agencies to create health information exchange (HIE) between EMS patient electronic care records (EPCR) with receiving hospitals to improve patient care and save lives in both day to day and disaster conditions.

Prior to this requirement CCEMSA had established an active HIE stakeholder workgroup and HIE project. Following the EMSA notice, CCEMSA issued an all stakeholder advisory to Fire, Ambulance and Hospital partners to prepare to have a “HIE capability” by January 2018 and concurrently began work on internal CCEMSA HIE readiness seeking grant opportunities and stakeholder support.

All medical transportation providers in Contra Costa linking to First Watch and all Community hospitals using EPIC Care Everywhere HIE exchange currently have already met this local CCEMSA advisory requirement.

The CCEMSA HIE project has several phases. HIE readiness phase I and II are internal to CCEMSA and CCHS. The \$250,000 approved by the Finance Committee for FY 2018-19 is dedicated to completing the “HIE readiness” and was not contingent on the EMS Agency applying for the EMS Authority grant opportunities.

1. **HIE readiness phase I:** This involves linking all ground (both emergency and non-emergency) & air medical transportation providers’ existing electronic prehospital care record (EPCR) platforms to First Watch (the Contra Costa EMS System’s data hub). This phase is approximately 90% complete.

¹ All prehospital EHRs must be compliant with new state EMS System Data requirements as specified in the January 5, 2016 California EMSA letter at: <https://www.emsa.ca.gov/Media/Default/PDF/EMS%20Data%20System%20Requirements%202016%20.pdf>



2. **HIE readiness phase II:** This phase is about to begin and will link First Watch with the Contra Costa Health Services (CCHS) Data warehouse. This capability will allow prehospital records to be “linked” with hospital disposition data for those served by CCHS services for the very first time. The CCHS data warehouse serves Contra Costa Regional Medical Center and clinics, all Contra Costa Health Services Divisions, Contra Costa Health Plan and supports key county initiatives targeting the county’s most vulnerable populations. Medical transportation providers, disproportionately serve these populations. This phase is about to begin and is a critical to assuring that the data infrastructure is in place to pursue sustainable HIE with other partners.
3. **The EPIC HIE integration phase:** This final and most ambitious part of the project requires compliance with the EMSA’s grant level criteria including the SAFR (Search, Alert, File and Reconcile) capabilities. This phase requires “linking” to EPIC’s “*Care Everywhere*” HIE exchange between EPIC ready hospitals in the region. The CCEMSA HIE project does not require a third party Health Information Organization (HIO). It is this phase that will require additional start-up and funding to achieve and sustain long term.

California EMSA/CMS Grant update: In October the State EMS Authority released the +EMS Local Assistance grant funded by the Centers for Medicare and Medicaid Services. The grant requires at least one 911 emergency ambulance provider and one hospital to participate. Grant deliverables demand that all four SAFR capabilities be demonstrated based on strict performance metrics by the end of the grant period. If deliverables are not met there is a risk that all grant funds may need to be returned.

At the request of the EMS Director the grant criteria was reviewed by the CCHS Chief Medical Information Officer who advised CCEMSA that it was designed to benefit sophisticated bi-directional exchange systems with active HIOs such as San Diego BEACON Health Information Exchange Network. During this time CCEMSA learned that although it had the cooperation of at least one hospital (CCRMC); no contracted 911 emergency ambulance provider was willing to participate. Given these limitations CCEMSA will not be submitting a grant application.

Although the CCEMSA HIE project has been praised by representatives of the Office of the National Coordinator for Health Information Technology and does not require third party HIO or additional EPCR software solutions; CCEMSA recognizes the importance of having strong stakeholder support. Upon completion of the current HIE readiness phases CCEMSA will be in a much stronger position to gain that support.

If you have any further questions please contact me at Patricia.Frost@hsd.cccounty.us.

cc: Karen Mitchoff, Contra Costa County Supervisor, District IV

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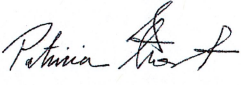
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MEMORANDUM

DATE: September 24, 2018

TO: Public Safety and EMS System Leadership

FROM: Patricia Frost, EMS Director 

SUBJECT: Exploration of Fire-EMS-Medical/Public Safety Emergency Communication and Disaster Technology Ballot Measure

Background: In 2018 the Contra Costa County Finance Committee asked the EMS Agency to explore options for an EMS System ballot measure to support and enhance day to day and disaster operations. Over the last 11 years County Fire-EMS and Public Safety Services have relied primarily on federal and state grants to support upgrades and enhancements in technology in response to legislative and regulatory requirements of our respective disciplines. Currently there exists no dedicated funding to support and sustain a wide range of technology and upgrades to support day to day and disaster preparedness throughout the county.

Technology continuously offers a wide range of solutions to position Fire, EMS, Medical and Public Safety responders with essential emergency communication, situation awareness and response platforms and resource management tools to manage and address the critical needs across disciplines.

Examples of technology currently in use across disciplines include: WebEOC, EBRCS, First Net, PSAP and Fire Medical Dispatch technologies, Community Warning systems, Staff call back and notification systems, Pulsepoint, Tablet Command, EMS System Situation Status Management platforms, ReddiNet, First Watch, First Pass, Electronic prehospital health care record systems supporting bi-directional exchange, Integrative analytic solutions to track cross discipline county wide initiatives. Technology solutions are relied on to perform day to day supporting the public safety. Sustainable funding is required to support these efforts.

On October 22nd I will be returning to the Finance Committee to report on the interest within the community to support critical technology infrastructure and would like to have a letter of interest. This important effort would require strong collaboration across disciplines to be successful to plan on the ballot during the 2020 election. I look forward to your response.



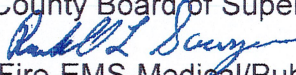
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**CONTRA COSTA
HEALTH SERVICES**
Interoffice Memo

To: Contra Costa County Board of Supervisors Finance Committee
From: Randy Sawyer 
Subject: Exploration of Fire-EMS-Medical/Public Safety Emergency
Communication and Disaster Technology Ballot Measure
Date: October 4, 2018
cc: Patricia Frost, Anna Roth

I support a ballot measure that will ensure a consistent revenue for Fire-EMS to keep up with technology that will assist in improving the response to emergencies.

Responding to emergencies communication technology has and is changing very quickly and the technology that can enhance on how emergencies are managed and assist in the response has been greatly enhanced. Such communication devices as hand held radio technology allows for many channels of communication during a response and the ability to have your own channel and to be a party of a wide audience of different emergency response agencies is invaluable.

It is important that all emergency responders be able to communicate with each during a response. This communication will allow the different agencies to understand the situation and what is occurring. This communication will assist in coordinating response efforts and keeping the responders safe. The Hazardous Materials Response Team works closely with the ambulance response to ensure that people that may have been contaminated are safe to transport.

During a major disaster it is important that all agencies and jurisdictions are informed of what other agencies are doing and what support and resources that they may need. WebEOC is the technology that is being used by the County. To make sure that WebEOC meets the needs of Health Services, computer programs are being developed to be able to replace the Health Services incident response management system now being used (IRIS).

EMS and to some degree the Hazardous Material Response teams have been able to get many technology and communications upgrades using different grant streams. The grants are not as available as they were and to keep a response agency up to date on technology relying on uncertain funds is not viable. It is critical that EMS has consistent revenue to support the every improving devises that do assist during emergencies.



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DANIEL.PEDDYCORD@HSD.CCCOUNTY.US

DATE: October 18, 2018

To: Contra Costa County Finance Committee and Public Safety and EMS System Leadership

RE: Ballot Measure to Support Fire-EMS-Public Safety Emergency Communications.

FROM: Daniel Peddycord, Public Health Director
Contra Costa Health Services

The ability to communicate quickly and effectively in an Emergency is essential to the health and welfare of the public, as well as to the myriad of personnel, agencies and partners that we call upon to respond to disaster and emergency events. The past several years alone has been hugely instructive as to the frequency and severity of regional wild fires devastating communities and severely impacting emergency response personnel and our region wide network of health systems. Add to this the likelihood of other natural disasters, such as earthquakes, with significant consequence as well as the ongoing threats of large scale environmental incidents and even biological events and we clearly understand the importance of maintaining highly functional emergency communications systems.

The local Public Health system considers it essential that we support upgrades and enhancements in technology to Fire-EMS-Public Safety Emergency Communications systems. Keeping pace with, and leveraging the advantages of technology, also serves to benefit the local health system. Rare is the case when a moderate to large scale regional or local disaster does not have direct impact on surge demand for local health care providers, hospitals, urgent care centers, assisting living centers, dialysis centers and the local public health system. The need for patient movement, redeployment of health personnel and supplies and the ability to covert an ambulatory care system into an urgent care system depend on vital and timely information provided by our emergency response partners.

For these reasons and far more the local public health system supports a 2020 local ballot initiative that seeks to help fund the critical technology needs and upgrades to our emergency response system.



RESURGENT
BIOMEDICAL CONSULTING

Patricia Frost, RN, MS, PHN, PNP
EMS Director
Contra Costa County Emergency Medical Services
777 Arnold Drive, Suite 110
Martinez, CA 94553

October 13, 2018

Dear Pat,

We are writing to you today to voice our support and encouragement for continued recognition and funding of a Contra Costa County EMS "System of Care" to increase survival from Sudden Cardiac Arrest (SCA).

Contra Costa County EMS (CCCEMS) and affiliated fire departments have a long history of working to increase survival from SCA. Throughout the years you have implemented many cutting-edge programs and technology in EMS care including HeartSafe Community, Emergency Medical Dispatch with dispatch CPR, first responder defibrillation, high-performance CPR, STEMI triage with STEMI Receiving Centers, CARES, and data surveillance. In addition, EMS personnel throughout your county have attended several medical symposiums on analyzing CPR performance as part of a county-wide SCA continuous quality improvement (CQI) initiative.

CCCEMS is poised to become one of the most proficient EMS Systems on the West Coast and perhaps the United States. The combination of leadership, personnel, passion, technology, training, citizen involvement, and adoption of CQI provide a foundation for continued improvement and lasting success. The SCA survivors in your region certainly recognize your efforts.

It is very timely that you are working to secure financial support for the many efforts underway. Frequently, projects and technology are funded without regard to sustaining an effort. It is vital to evaluate programs and technology to determine what should be continued and what may need to change. Financial support is key.

There are many efforts and programs in development that will influence your future in this area:

CPR LifeLink	Tools to implement High-Performance CPR and Telecommunicator CPR
EMS Agenda 2050	Collaborative effort to build a bold plan for the next several decades
NCAC	National Cardiac Arrest Collaborative
SIREN	Strategies to Innovate EmergENCy Care (clinical trials network)
ReSS	AHA's Annual Resuscitation Science Symposium - Chicago 2018
NAEMSP	National Association of EMS Physicians Annual Conference - Austin 2019
ECCU	Emergency Cardiac Care Update - Seattle 2019
THA	Take Heart America National Initiative
SCAF	Sudden Cardiac Arrest Foundation - Survivors Group

With more than 40 years of involvement in Emergency Medical Services and resuscitation, we are convinced that the best is yet to come. Technology continues to advance, and we need EMS systems like yours to be well supported both financially and with good leadership, ready to act. Please let us know if we can be of any further assistance in the future.

Best regards,



Bob Niskanen, MSEE
Managing Director



Pam Dodson, RN
Clinical Program Manager



April 12, 2018

Pat Frost, RN, MS, PNP
Director, Emergency Medical Services
Contra Costa Health Services
1340 Arnold Drive, Suite 126
Martinez, CA 94553

Dear Ms. Frost,

Health Services Advisory Group (HSAG) is writing this letter in strong support of your agency's application for grant funding to initiate the Health Information Exchange (HIE) project for Emergency Medical Services in Contra Costa county. We believe that the implementation of an HIE between the EMS providers and hospitals will result in improved care in both the pre-hospital and hospital settings. The grant funding will facilitate a 90/10 matching of Federal Medicaid dollars that will build the infrastructure for the secure movement of patient information and allow for better measurement of quality patient care and outcomes.

The Contra Costa EMS agency is well positioned to participate in this project. The county is already participating in the POLST e-Registry Pilot. In addition, it is also participating in an HSAG Special Innovation Project funded by the Centers for Medicaid and Medicare Services (CMS) to improve the stroke system of care in the county. Contra Costa is also a county where HSAG has organized a community coalition of providers to improve care transitions and care coordination. Receiving this grant funding to design and implement an HIE architecture will build additional capability to improve outcomes for county residents. The use of health information exchange will allow accurate communication of critical data from the first responders and ambulance transport to the in-hospital care team members, especially for treatment requiring time sensitive treatment or therapy such as trauma, heart attack, or stroke. An integrated information system will also allow for more efficient transitions of care and better decision support for the EMS providers to deliver the patient to the proper facility.

HSAG offers strong support to your agency to help achieve funding of this important project. We believe your agency has a capable and talented leadership team that is ready and able to receive the grant funding for the implementation of an effective HIE that will ultimately result in better health outcomes for the county residents.

Sincerely,

A handwritten signature in blue ink that reads "Mary Ellen Dalton". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Mary Ellen Dalton, PhD, MBA, RN
Chief Executive Officer
Health Services Advisory Group, Inc.