FINANCE COMMITTEE

July 23, 2018
9:00 A.M.
651 Pine Street, Room 101, Martinez

Agenda

Supervisor Karen Mitchoff, Chair
Supervisor John Gioia, Vice Chair

Agenda Items:	Items may be taken out of order based on the business of the day and preference of the Committee

1. Introductions

2. Public comment on any item under the jurisdiction of the Committee and not on this agenda (speakers may be limited to three minutes).

3. CONSIDER approving the Record of Action for the June 5, 2018, Finance Committee meeting (Lisa Driscoll, County Finance Director)

4. CONSIDER report and request on EMS System Funding Recommendations. (Patricia Frost, Director, Emergency Medical Services)

5. The next meeting is currently scheduled for August 27, 2018.

6. Adjourn

The Finance Committee will provide reasonable accommodations for persons with disabilities planning to attend Finance Committee meetings. Contact the staff person listed below at least 72 hours before the meeting.

Any disclosable public records related to an open session item on a regular meeting agenda and distributed by the County to a majority of members of the Finance Committee less than 96 hours prior to that meeting are available for public inspection at 651 Pine Street, 10th floor, during normal business hours.

Public comment may be submitted via electronic mail on agenda items at least one full work day prior to the published meeting time.

For Additional Information Contact:

Lisa Driscoll, Committee Staff
Phone (925) 335-1021, Fax (925) 646-1353
lisa.driscoll@cao.cccounty.us

Contra Costa County Board of Supervisors

Subcommittee Report

FINANCE COMMITTEE **3.**

Meeting Date: 07/23/2018
Subject: Record of Action for June 5, 2018 Finance Committee Meeting
Submitted For: FINANCE COMMITTEE,
Department: County Administrator
Referral No.: N/A
Referral Name: Record of Action
Presenter: Lisa Driscoll, County Finance Director **Contact:** Lisa Driscoll (925) 335-1023

Referral History:
County Ordinance requires that each County body keep a record of its meetings. Though the record need not be verbatim, it must accurately reflect the agenda and the discussions made in the meetings.

Referral Update:
Attached for the Committee's consideration is the Record of Action for its June 5, 2018 meeting.

Recommendation(s)/Next Step(s):
Staff recommends approval of the Record of Action for the June 5, 2018 meeting.

Fiscal Impact (if any):
No fiscal impact.

Attachments

Draft Record of Action June 5, 2018

D R A F T

Agenda

FINANCE COMMITTEE

June 5, 2018
9:00 A.M.
651 Pine Street, Room 101, Martinez

Supervisor Karen Mitchoff, Chair
Supervisor John Gioia, Vice Chair

Agenda Items:	Items may be taken out of order based on the business of the day and preference of the Committee

Present: Chair Karen Mitchoff
Vice Chair John Gioia

Staff Present: Lisa Driscoll, Finance Director; Eric Angstadt, Chief Assistant County Administrator; Stephen Kowalewski, Chief Deputy Public Works Director; Will Wahbeh, Senior Capital Facilities Project Manager/Public Works; Gabriel Lemus, CCC DCD; Kristin Sherk, CCC DCD; Daniel Davis, CCC DCD; Jaclyn Isip, CCC DCD

Attendees: Mike Alvarez, Reclamation District 799; Dana Fraticelli, BGCCC; Eric Whitney, CCC HH&HS; Lana Tilley, RYSE; Brianna Robinson, Opportunity Junction

1. Introductions

2. Public comment on any item under the jurisdiction of the Committee and not on this agenda (speakers may be limited to three minutes).

   There were no comments from the Public on items not on the agenda.

3. Staff recommends approval of the Record of Action for the March 26, 2018 meeting.

   The Record of Action for the March 26, 2018 meeting was approved as recommended.

   AYE: Chair Karen Mitchoff, Vice Chair John Gioia
   Passed

4. CONSIDER accepting Department of Conservation and Development's attached recommendations regarding FY 2018/19 (2nd Year) Community Development Block Grant - Economic Development & Infrastructure/Public Facilities Categories.

Gabriel Lemus presented the report and recommendations regarding FY 2018/19 CDBG - Economic Development Category and Infrastructure/Public Facilities Category funding. Supervisor Mitchoff requested, and Mr. Lemus provided, clarification of the allocations and how they were determined. There were no changes to the recommendations, which were approved by the Committee. At the conclusion of the discussion Supervisor Mitchoff asked if any of the grantee representatives wished to speak. There were no speakers. Supervisor Gioia asked Mr. Alvarez where Reclamation District 799 was located. Mr. Alvarez responded.

AYE: Chair Karen Mitchoff, Vice Chair John Gioia
Passed

5. Approve Department of Conservation and Development's attached recommendations regarding allocating Community Development Block Grant (CDBG) funds for the acquisition of real property.

Kristin Sherk presented the report regarding allocating Community Development Block Grants for the acquisition of real property located at 205 41st Street, Richmond. The funding will allow the RYSE Center (RYSE, Inc.) to acquire real property, which is currently leased to operate a free public youth center. The center serves low-income youth in West Contra Costa County between the ages of 13 and 21. Supervisor Mitchoff asked why the CDBG allocation was not for the full amount of the purchase. Mr. Lemus explained that two of the parcels were not developed and therefore ineligible for CDBG funding. The balance of funds will come from District I's allocation of Livable Communities Trust Fund monies. The Committee approved staff's recommendations. It should be noted that the staff report indicates that there will be a public hearing scheduled for use of the funds. Mr. Lemus clarified that HUD's definition of public hearing is different that of the Board and that the CDBG items will be on the County Board's consent agenda.

AYE: Chair Karen Mitchoff, Vice Chair John Gioia
Passed

6. Accept attached report regarding the Countywide Single Audit for the Fiscal Year Ending June 30, 2017 (also attached).

Lisa Driscoll informed the Committee that the Single Audit had no findings of material misstatement nor instances of noncompliance. The Committee accepted the report.

AYE: Chair Karen Mitchoff, Vice Chair John Gioia
Passed

7. ACCEPT Quarterly Capital Projects update.

Will Wahbeh, Senior Capital Facilities Project Manager, presented a summary of the capital report. At the conclusion of the presentation, Supervisor Gioia asked if all of the capital project positions were filled. Steve Kowalewski responded that the department was working to fill the positions. Supervisor Gioia expressed his frustration with delays in reopening the El Sobrante Library.

AYE: Chair Karen Mitchoff, Vice Chair John Gioia
Passed

8. The next meeting is currently scheduled for July 23, 2018.

9. Adjourn

At the conclusion of the meeting, Supervisor Mitchoff encouraged everyone to get out and vote.

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Contra Costa County Board of Supervisors

Subcommittee Report

FINANCE COMMITTEE **4.**

Meeting Date: 07/23/2018
Subject: Contra Costa EMS System Funding Report
Submitted For: Anna Roth, Health Services Director
Department: Health Services
Referral No.: 5-23-17 D.6
Referral Name: County Service Area EM-1 Basic Assessment
Presenter: Patricia Frost (925) 646-4690 **Contact:** Patricia Frost, Director, EMS

Referral History:
On March 26, 2018, the Finance Committee heard a report and request for funding from Patricia Frost. The Committee discussed the financial needs of the system, possible State legislation to address the need, pursuit of a Special Tax, and future grant opportunities. The Committee directed Ms. Frost to forward a report to the Board to recommend exploration of a ballot measure for a Special Tax to support EMS and other health related issues and to the direct the County Administrator to develop a plan to bring back to the Committee by the end of 2018. The Committee next moved to address some of the current financial gaps and initially recommended gap-funding. However, due to lack of clarity regarding the Health Information Exchange (HIE) grant, the Chair asked that the item be returned to Committee.

On May 23, 2017, the Board of Supervisors referred the matter of an increase in the basic assessment fee for County Service Area EM-1 to the Finance Committee after a hearing to consider a tentative report on the proposed assessment for the 2017/18 fiscal year.

On October 23, 2017, the attached report was submitted for consideration by the Committee. A presentation by Patricia Frost, Director of Emergency Medical Services, was provided to the Committee. The referral was to consider an increase to the basic assessment rate for County Service Area EM-1; however, the focus of the report was on system needs rather than funding. Ms. Frost was directed to return to Committee with a full report of need and recommendations on funding in February.

Referral Update:
The attached report and attachments are submitted for consideration.

Recommendation(s)/Next Step(s):
CONSIDER report and request by the Director of Emergency Medical Services on EMS System Funding Recommendations.

Attachments

Contra Costa EMS System Funding Report

HIE-and-Medi-Cal Funding Summary

Contra Costa HIE and Data Integration Project Overview

EMS Data System Requirements

CCEMS System Advisory HIE memo

Letter of Support from HSAG for HIE Grant

CONTRA COSTA
HEALTH SERVICES

County of Contra Costa
EMERGENCY MEDICAL SERVICES
Memorandum

DATE: July 23, 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 supporting programs (e.g. Trauma, Cardiac Arrest, STEMI, Stroke and EMS for Children) known to produce life-saving outcomes.

Recommendation #1: Establish an interim annual EMS System Program enhancement contribution/investment of up to $750,000 [1]from 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 reviewed the items for gap-funding from the general fund reserves to total $500,000. In July of 2018 the EMS Director was asked to return with an updated report for further discussion.

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 the long term EMS System funding needs and recommended on-going referral to Finance to begin working on the two year process

[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.

to put a Special Tax on the June 2020 ballot. Chief Carman and EMS Director were directed to submit an updated funding report by the end of 2018 in collaboration with County Fire Chiefs.

Summary of Eligible Countywide Programs (Gap funding recommendations)		
Program Infrastructure	**Countywide EMS System Purpose**	**Annual Funding Request**
First Watch/First Pass Patient Safety and EMS Ambulance Compliance Data System	This technology platform and program supports contract specified ambulance response time compliance reporting. It is also positioned to be the EMS System data hub for all electronic patient care record oversight. All patient care delivery will eventually be connect to the CCCEMS First Watch data hub to enable comprehensive medical oversight and EMS Systems of Care reporting. **(Regulatory System Compliance)**	$ 200,000
ImageTrend technology certification and provider permitting system.	This program supports continuity of operations using an online system supporting timely processing of ambulance provider permitting, EMT certification, ambulance equipment checks and training program authorizations and audits. **(Regulatory System Compliance)**	$ 50,000
Bi-directional Prehospital Exchange with Hospitals **CMS Grant opportunity	In April 2018 the Centers for Medicare and Medicaid will offer a State Health Information Exchange (HIE) grant to assist local EMS Agencies in achieving new requirements for bi-directional HIE. The annual funding level requested includes dollars for both the grant match and non-grant covered project management costs**.** Bi-directional exchange will allow life-saving patient information to be sent and received between the field and hospitals. When patient disposition information is connected to the prehospital record bi-directional exchange will support value based reimbursement for providers participating in MediCaid, MediCare and GEMT programs. The EMS Agency intends to apply for an upcoming grant however significant progress to support bi-directional exchange could occur with this funding. **(NEW: EMS System requirement/)**[2]	$ 250,000
ReddiNet EMS System emergency and disaster communication platforms	This program represents the cost of medical health satellite and web based technology system and upgrades supporting all clinics, hospitals, dispatch centers, long term care facilities and OES emergency communications in day-to-day and multi-casualty and disaster conditions**. (Regulatory Med/Health Disaster System Infrastructure)**	$ 43,000
CARES (Cardiac Arrest Registry for Enhanced Survival)	National Registry annual subscription fee. National Cardiac Arrest Data Registry participation is required to meet EMSA standardized reporting requirements for Cardiac Arrest. **(EMSA State Regulatory System Requirement)**	$ 7,000

[2] January 5, 2016 California EMSA letter New State EMS Data System Requirements

The Importance of Bi-directional Exchange: As one of the highest performing EMS systems in California and the Bay Area, the Contra Costa EMS Agency is responsible for both creating and sustaining technology and patient information sharing programs and infrastructure required under Title 22 Health and Safety Code 2.5.

The requests submitted by the Contra Costa EMS Agency act to optimize pre-hospital care improving patient outcomes during day to day and disaster operations. Of crucial importance is the need to create a prehospital bi-directional exchange capability with hospitals to position the county EMS System for further optimization and value based medical transportation reimbursement.

In the present environment the lack of an integrated patient care record constrains EMS field providers and the county health care system from addressing challenges that waste time, effort and money including: emergency department overcrowding, substance abuse, domestic violence, frequent users, vulnerable populations, infectious disease and homelessness. This lack of integration silos EMS providers from being a full partner in crafting solutions that assure:

The right patient receives the right response with the right resource within the right amount of time…at the right cost.

Without integrated data Contra Costa EMS providers will simply bear the burden of responding to large numbers of patients who are known in "integrated systems" to benefit from more appropriate health care services including alternative destination.

At present the Contra Costa EMS System does not have the data infrastructure to support the sophisticated triage needed to meet those challenges.

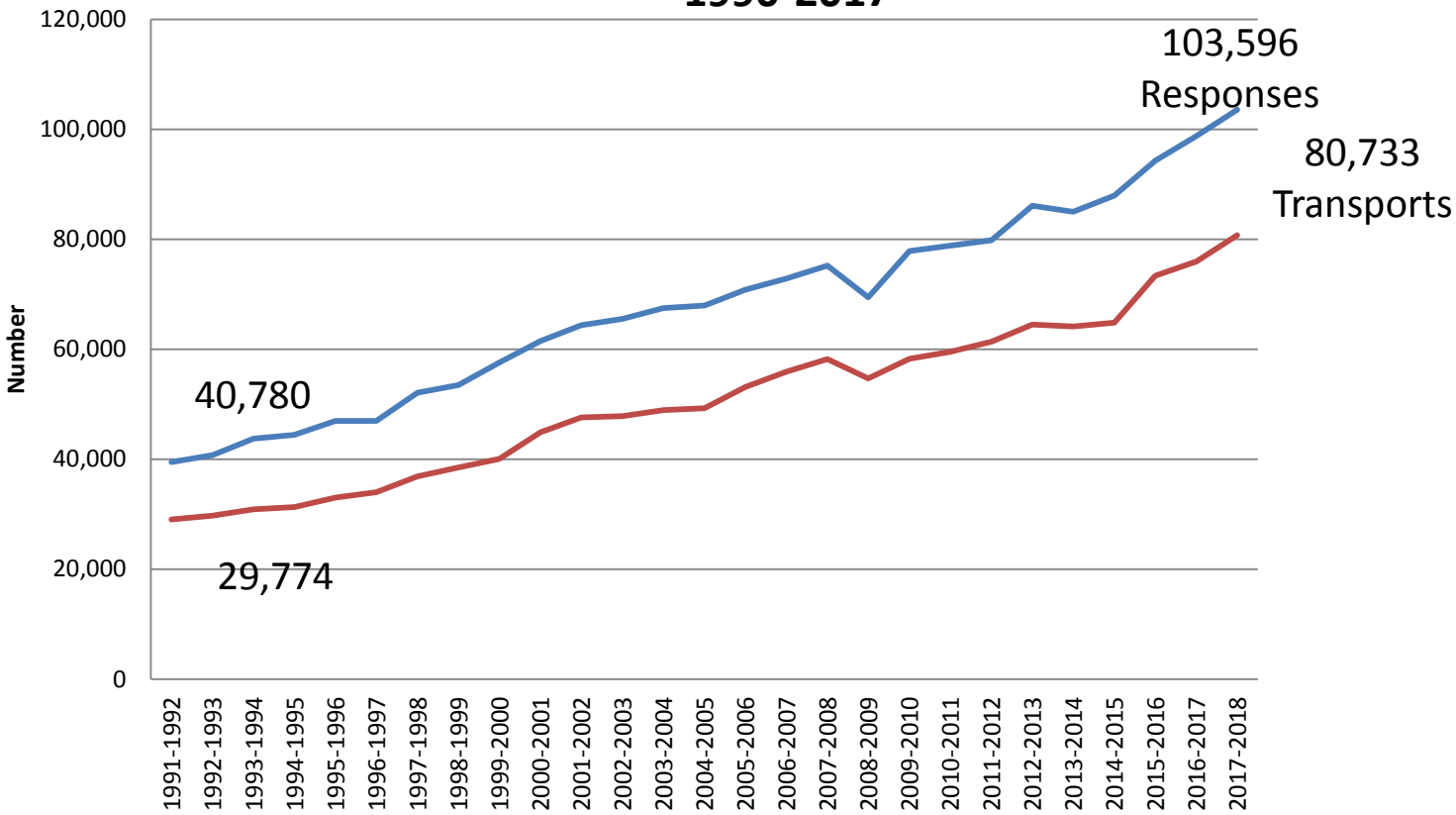
The Local EMS Agency requires up to $ 750,000 per year to assure the continuity of operations of the County's High Performance EMS System and fulfill all statutory functions, until such time that a long term revenue model can be established. As discussed in previous reports Fire Paramedic programs are anticipated to require up to 2.5 million in EMS System support

Summary:

Gaps in Emergency Medical Services funding threaten the Countywide EMS Services in meeting its statutory mission. LEMSA Measure H funding is no longer sufficient to sustain program operations and upgrade data system infrastructure to meet the demands of an EMS system that has increased in volume and complexity by 250% since Measure H was approved.

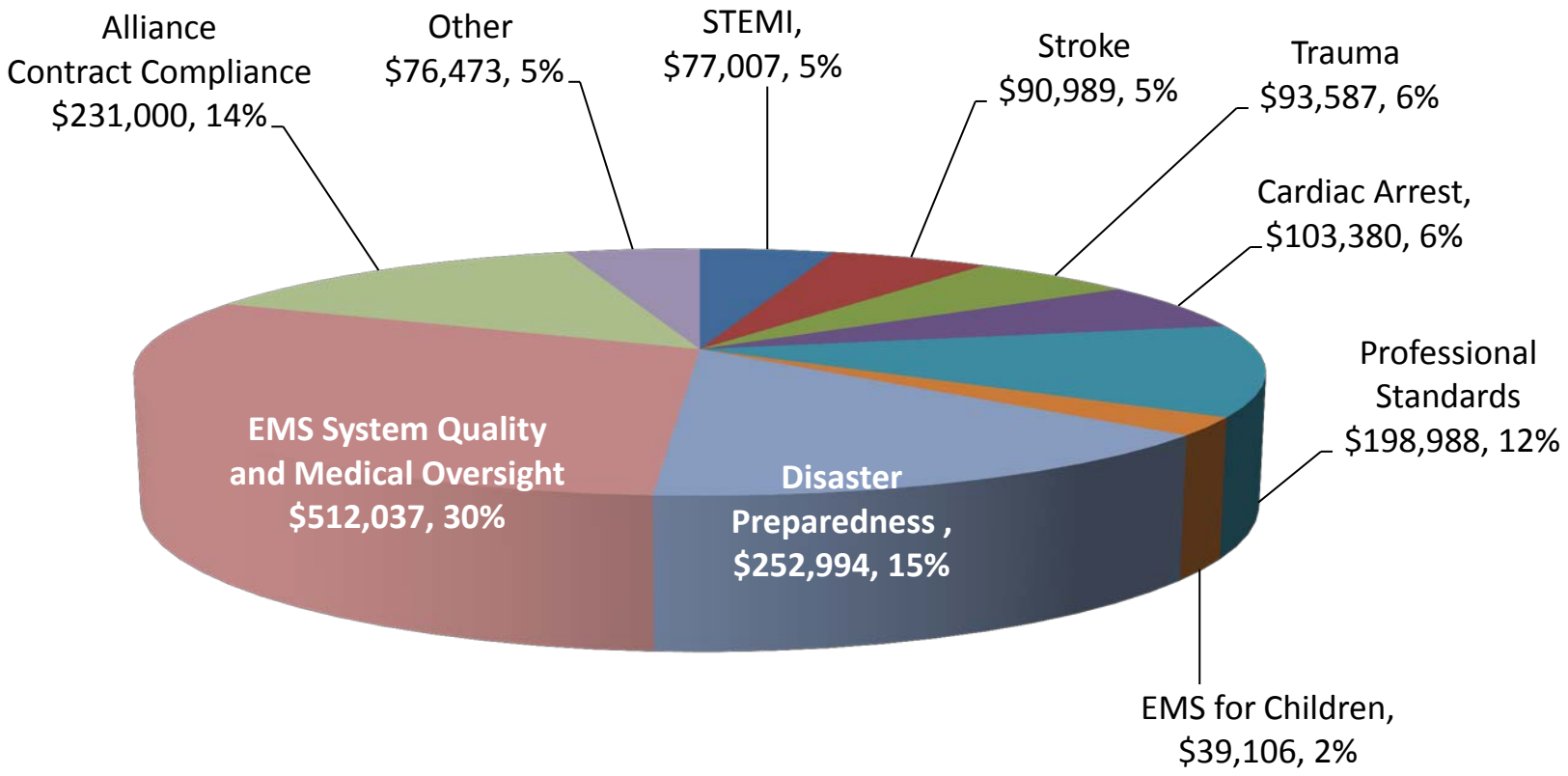
CONTRA COSTA
HEALTH SERVICES

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

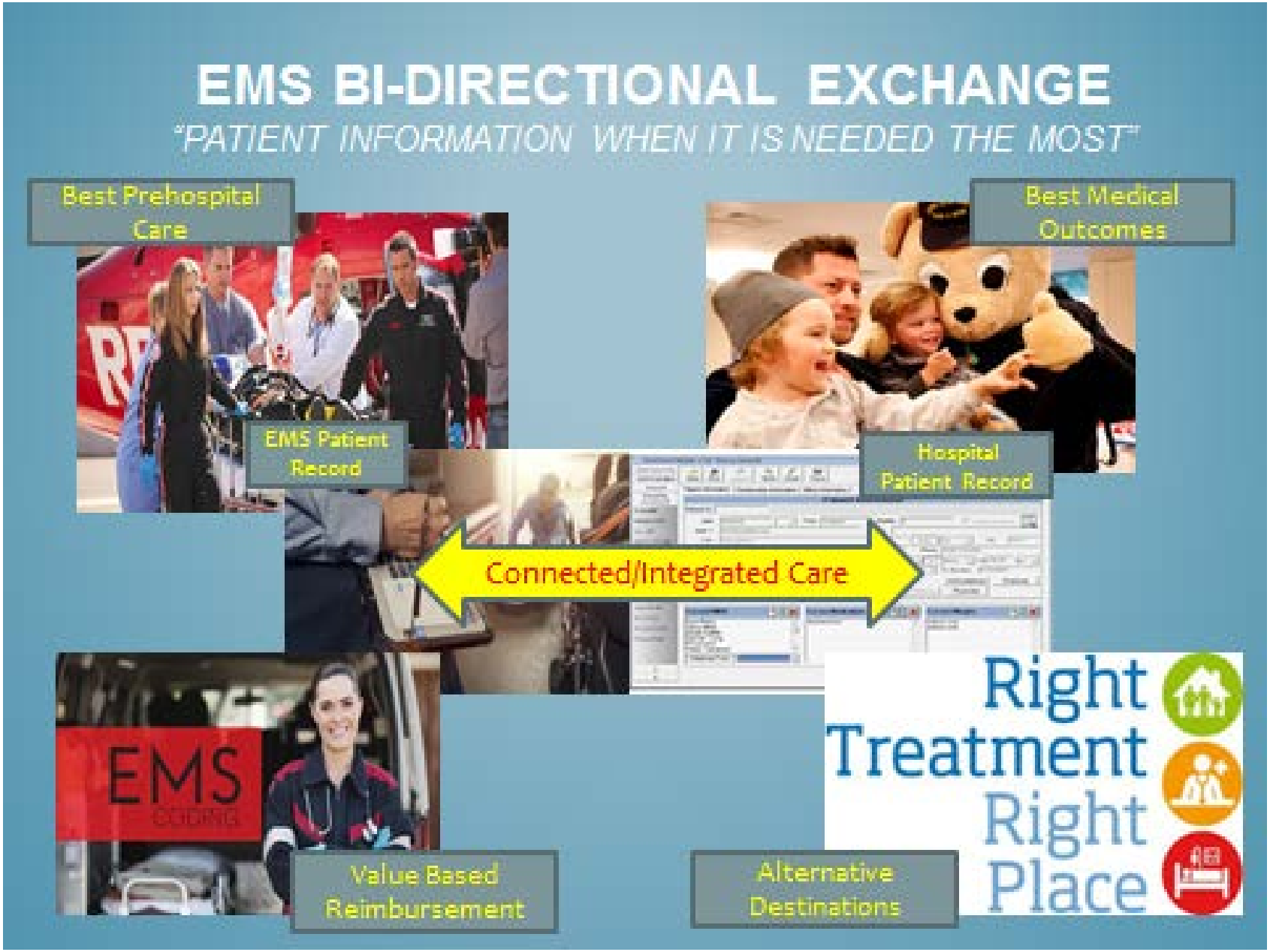


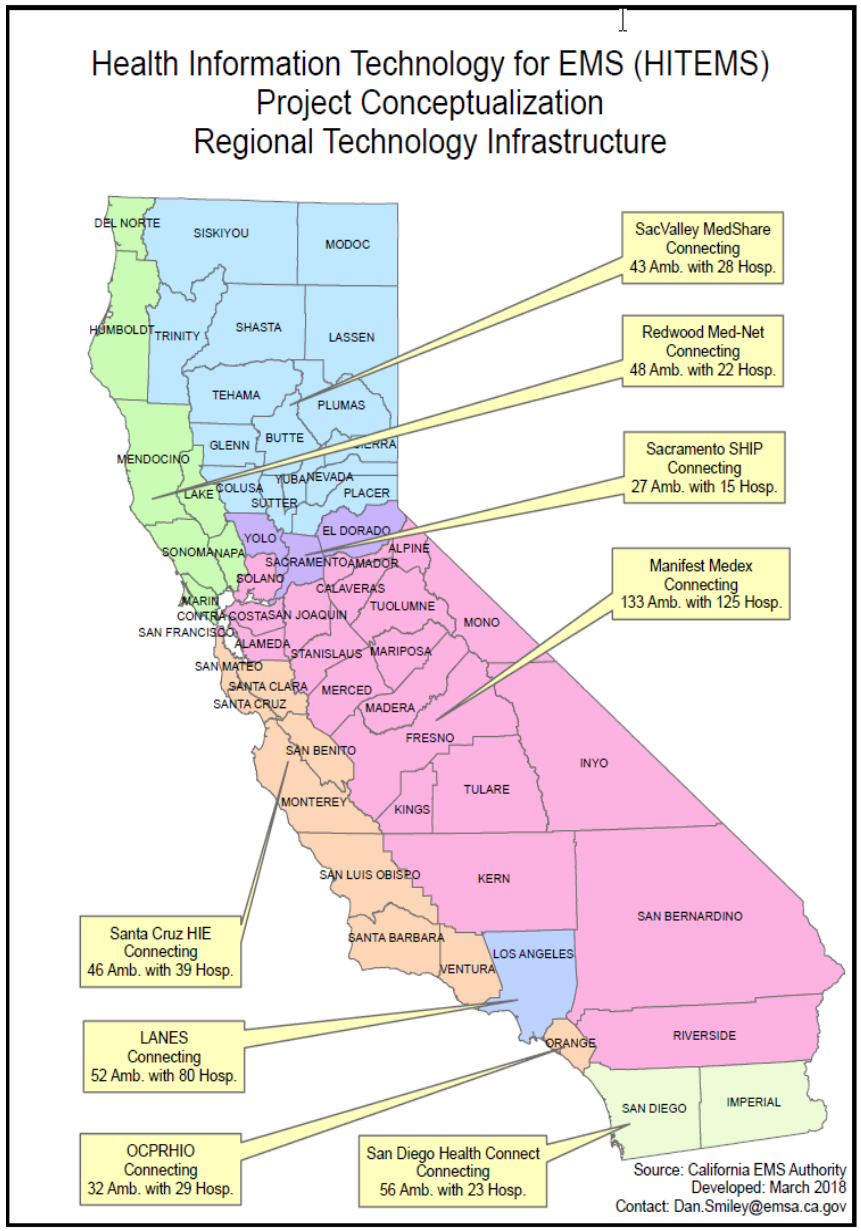
Local EMS Agency cost of compliance with local, state and grant requirements for EMS Systems and Programs

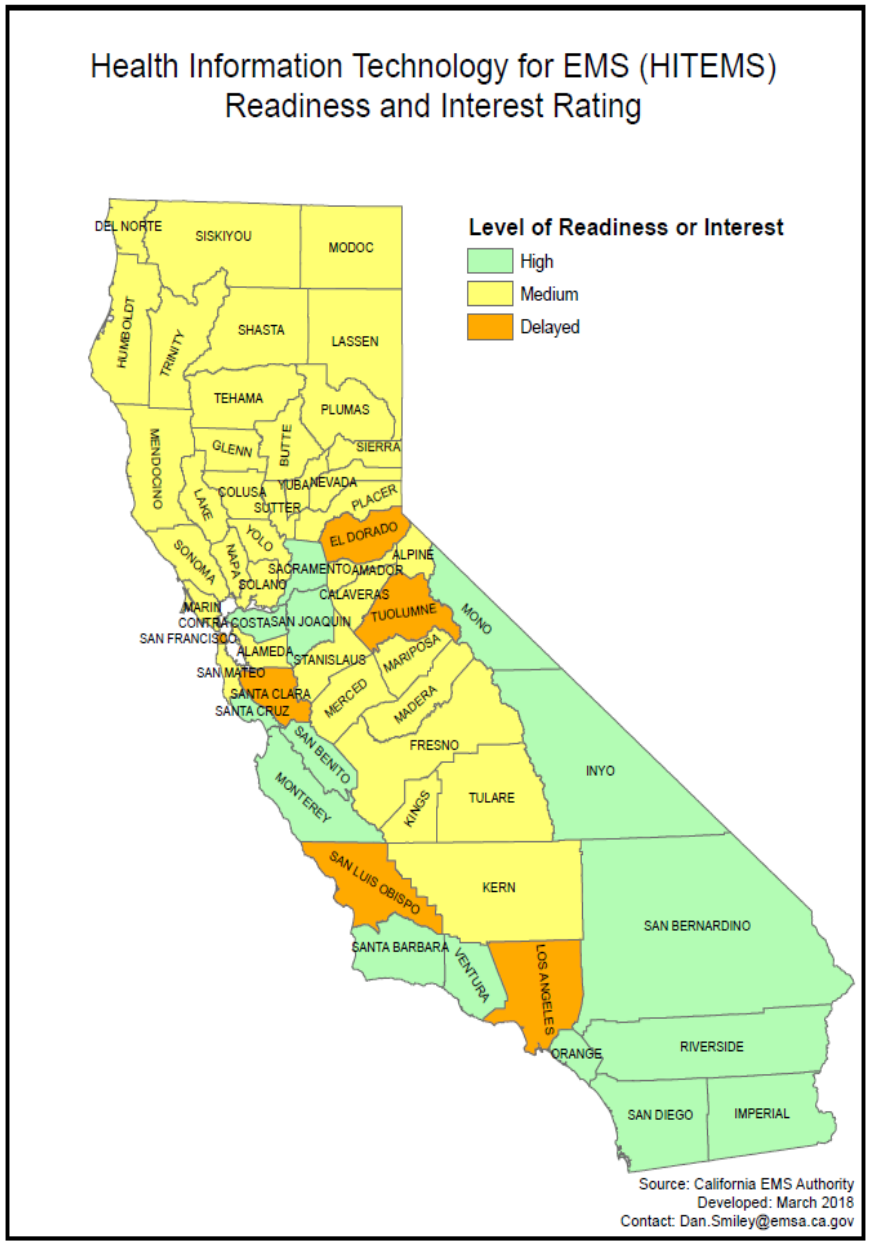
Contra Costa Emergency Medical Services
EMS System of Care and Paramedic Program Support*
FY 2017-2018 total $1,675,560



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


EMS BI-DIRECTIONAL EXCHANGE
"PATIENT INFORMATION WHEN IT IS NEEDED THE MOST"
Best Prehospital Care
Best Medical Outcomes
EMS Patient Record
Hospital Patient Record
Connected/Integrated Care
EMS
CODING
Value Based Reimbursement
Alternative Destinations
Right Treatment Right Place


Health Information Technology for EMS (HITEMS)
Project Conceptualization
Regional Technology Infrastructure
SacValley MedShare
Connecting
43 Amb. with 28 Hosp.
Redwood Med-Net
Connecting
48 Amb. with 22 Hosp.
Sacramento SHIP
Connecting
27 Amb. with 15 Hosp.
Manifest Medex
Connecting
133 Amb. with 125 Hosp.
Santa Cruz HIE
Connecting
46 Amb. with 39 Hosp.
LANES
Connecting
52 Amb. with 80 Hosp.
OCPRHIO
Connecting
32 Amb. with 29 Hosp.
San Diego Health Connect
Connecting
56 Amb. with 23 Hosp.
DEL NORTE
SISKIYOU
MODOC
HUMBOLDT
TRINITY
SHASTA
LASSEN
TEHAMA
PLUMAS
GLENN
BUTTE
SIERRA
MENDOCINO
LAKE
COLUSA
YUBA
NEVADA
SUTTER
PLACER
YOLO
EL DORADO
SONOMA
NAPA
ALPINE
SACRAMENTO
AMADOR
SOLANO
CALAVERAS
MARIN
CONTRA COSTA
SAN JOAQUIN
TUOLUMNE
MONO
SAN FRANCISCO
ALAMEDA
STANISLAUS
MARIPOSA
SAN MATEO
SANTA CLARA
MERCED
SANTA CRUZ
MADERA
FRESNO
SAN BENITO
INYO
MONTEREY
TULARE
KINGS
SAN LUIS OBISPO
KERN
SAN BERNARDINO
SANTA BARBARA
VENTURA
LOS ANGELES
ORANGE
RIVERSIDE
SAN DIEGO
IMPERIAL
Source: California EMS Authority
Developed: March 2018
Contact: Dan.Smiley@emsa.ca.gov


Health Information Technology for EMS (HITEMS)
Readiness and Interest Rating
Level of Readiness or Interest
High
Medium
Delayed
DEL NORTE
SISKIYOU
MODOC
HUMBOLDT
TRINITY
SHASTA
LASSEN
TEHAMA
PLUMAS
GLENN
BUTTE
SIERRA
MENDOCINO
LAKE
COLUSA
YUBA
NEVADA
SUTTER
PLACER
YOLO
EL DORADO
SONOMA
NAPA
ALPINE
SACRAMENTO
AMADOR
SOLANO
CALAVERAS
MARIN
CONTRA COSTA
SAN JOAQUIN
TUOLUMNE
MONO
SAN FRANCISCO
ALAMEDA
STANISLAUS
MARIPOSA
SAN MATEO
SANTA CLARA
MERCED
SANTA CRUZ
MADERA
FRESNO
SAN BENITO
INYO
MONTEREY
TULARE
KINGS
SAN LUIS OBISPO
KERN
SAN BERNARDINO
SANTA BARBARA
VENTURA
LOS ANGELES
ORANGE
RIVERSIDE
SAN DIEGO
IMPERIAL
Source: California EMS Authority
Developed: March 2018
Contact: Dan.Smiley@emsa.ca.gov

EMERGENCY MEDICAL SERVICES AUTHORITY
10901 GOLD CENTER DR., SUITE 400
RANCHO CORDOVA, CA 95670
(916) 322-4336 FAX (916) 324-2875

Health Information Technology for EMS (HITEMS) Program
Medi-Cal Funding and Matching Options Summary
Version: May 3, 2017

Funding to emergency medical services for the development of health information exchange and interoperability is now available via Medi-Cal (Medicaid) through a process established by the California Department of Health Care Services (DHCS). The State of California Emergency Medical Services Authority (EMSA) has submitted a proposal to develop a statewide approach to implement health information exchange (HIE) for two critical components of the health care system: Emergency medical services (EMS) and disaster response. Funding would be used to complete HIE on-boarding and to design and implement HIE architecture. This program is estimated to be up to $40 million and last through September 30, 2021.

The proposal focuses upon two primary integrated use cases, and several sub-cases, to incorporate interoperable health information technology tools and services to allow for hospitals and eligible professionals to achieve meaningful use objectives, such as transitions of care, counter-alerting, and medication reconciliation:

(1) **Emergency Medical Services**
- 1a. Daily Operations for Search, Alert, File, and Reconcile (SAFR) activities
- 1b. POLST eRegistry and Access
- 1c. Community Paramedicine and Mobile Integrated Healthcare
- 1d. EMS analytics

(2) **Disaster response**
- 2a. Disaster Professional Patient Search
- 2b. Patient Tracking

These use cases would utilize national standards that facilitate health information exchange and build upon the HIE work already accomplished in California under previous HIE funding, including the lessons learned in ONC Project.

PROJECTIONS:
It is anticipated that with project would be over $40 million ($10 million per year) and continue through September 30, 2021. Matching funds (estimated to be over $4 million) would be obtained from counties and non-profit Foundations.

<u>Funding Plan:</u>
To achieve the necessary funding match, the following sequential steps would be required:

1. A cash match (Non-Federal funds) from multiple sources would be identified.

2. “Matching” funds from non-profit Foundations, Counties, Health Departments* (), would be transferred to EMSA. *Note: Redirection of existing use of Maddy EMS Fund for data and information purposes and count toward CPE may be allowable in some cases.
3. EMSA would enter into an Interagency Agreement with DHCS to allow for an Intergovernmental Transfer (IGT) to DHCS.
4. DHCS would approve and match with Federal funding upon invoice and send back to EMSA.
5. EMSA would provide funding to local entities for Interoperability and HIT planning for EMS upon invoice.
6. EMSA would maintain HITEMS coordination, operations and statewide HIT compliance for EMS and disaster objectives.

Three major components are proposed as part of the 4 year plan:

- State HITEMS Coordination ($3 million)
- Contracts for EMS, POLST, and Community Paramedic Integration ($34 million)
- Disaster Operations Integration ($4 million)

State HITEMS Coordination:

State project coordination is estimated to be approximately $3 million ($750,000 annually). This would allow for HIE coordination, grant administration, technical assistance, and data analytics.

Contracts for EMS integration for EMS, POLST, and Community Paramedics:

It is estimated that up to 33 contracts (each LEMSA) at an average of $1 million each to allow for EMS providers to onboard to hospitals, HIEs, long term care facilities, behavioral health providers, and social services providers. This would allow for:

- EMS daily operations to implement the SAFR model for EMS providers,
- POLST eRegistry access and community integration,
- Community Paramedicine/Mobile Integrated Healthcare, and
- EMS analytics.

Disaster Operations Integration:

The creation of interoperability for disaster operations will include:

- Patient Unified Lookup System for Emergencies onboarding to HIEs,
- HIE to HIE Interoperability,
- Patient Matching,
- Patient Tracking.

MATCHING FUNDS:

It is anticipated that over $4 million in matching funds will come to EMSA from local County fund sources and the California HealthCare Foundation. This $4 million over 4 years will allow for the 90/10 match to yield up to $40 for HIE implementation.

Matching Sources:

1. Maddy EMS Funds

Utilize unallocated (Fund Balance) Maddy EMS Fund from the Discretionary EMS Account

2. California HealthCare Foundation

Utilize unspent ePOLST Registry money for matching purposes

3. County General Fund

Utilize CPE as fund source

4. EMSA General Fund

Redirect EMSA GF sources

For Further Information:

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Rick Trussell
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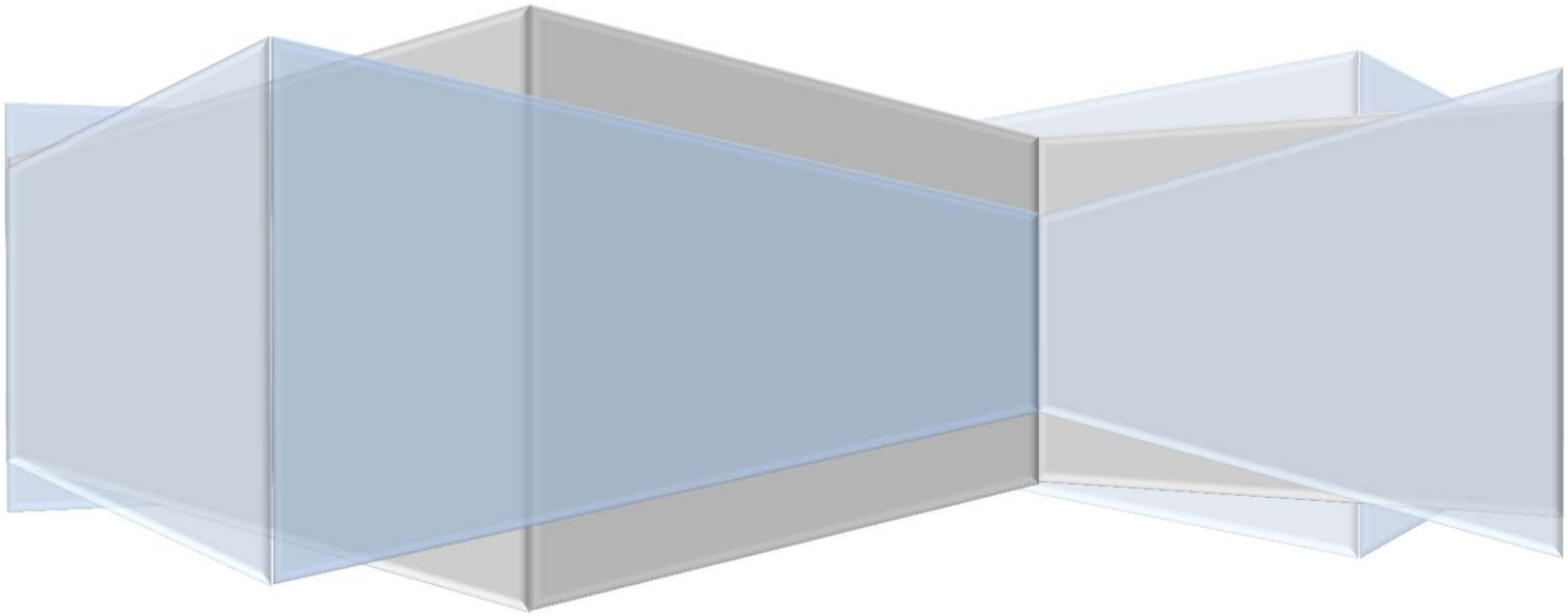
Contra Costa Emergency Medical Services
1340 Arnold Drive, Suite 126
Martinez, CA 94553

Bi-Directional Pre-Hospital Health Information Exchange

A Summary of Countywide EMS Data Integration Efforts Supporting Valued Based Patient Care

Contra Costa EMS Staff Report
August 2016



Introduction

Stimulated by the implementation of the Affordable Care Act, The State of California EMS Authority with support from the Office of the National Coordinator (ONC) has made it an expectation for all EMS Agencies to support bi-directional exchange of patient care data collected during the provision of Emergency Medical Services (EMS) to hospitals, public health, registries and state and federally mandated reporting. This is designed to support a wide variety of activities including:

- Patient safety
- High utilizer population management
- Public health and ACA patient care initiatives
- STEMI, Stroke, Cardiac Arrest, Trauma Systems of Care performance
- Quality and patient safety initiatives to achieve desired outcomes in environments grappling with limited resources and funding.
- Current and future State and National registries and reporting mandates for:
    - California Stroke Registries
    - Get with the Guidelines STEMI System Reporting
    - Trauma System Reporting
    - EMS-ED Transfer of Care Time
    - POLST (Physician Orders for Life Sustaining Treatment)
    - CARES (Cardiac Arrest Registry for Enhanced Survival)
- PULSE (Patient Unified Lookup System for Emergencies) Disaster Communications supporting patient movement (

The Contra Costa EMS (CCEMS) efforts build on a foundation of well-established partnerships, working with system experts to wholly integrate EMS patient data with hospital data, thus completing a full account of patient care from the inception of a 9-1-1 call to the discharge of that patient from the hospital. Over the five years the CCEMSA been focused on realistic, local solutions using current data resources and interface technology. This report provides a high level update for Contra Costa EMS stakeholders.

EMS Data System Problem: Silos, Silos, Everywhere

In 2013, EMSA awarded CCEMS grant funding to conduct an analysis of the EMS system's current data infrastructure. That study revealed untapped potentials for meaningful use associated with the preponderance of complex, user-unfriendly data systems and silos created that simply were unable to communicate with each other integration. The data systems in place were not interoperable.

This lack of interoperability created data management environments that were difficult for Fire-EMS first responders, ambulance providers, hospitals, County Public Health and the EMS Agency statutorily responsible for optimal county-wide coordination of emergency services. This resulted in laborious manual data entry, difficult access to basic analytics for performance reporting and situational awareness.

Bi-Directional Exchange

Bi-directional exchange is essential to supporting the Office of the National Coordinator and State EMS Authority required SAFR (Search, Alert, File and Reconcile) functions. The EMS Agency will be using First Watch as our county-wide EMS Data Hub to connect EMS related data platforms to achieve this this level of functionality and upgrading the system to First Pass as the primary tool for provider agency and EMS Agency. This will allow hospital discharge and patient disposition information to finally be available to the EMS provider agencies as part of their quality and medical oversight providing a level of data integration and analytics that will assist all end-users in their care of the patient.

Upcoming federal and state mandates associated with PULSE (Patient Unified Lookup System for Emergencies), Health Care Registries for Cardiac Arrest for Enhance Survival (CARES), Ambulance Patient Transfer of Care (APOT), Stroke and Physician orders for Life-Sustaining Treatment (POLST), Prehospital Core Measures, High Utilizer Initiatives, Public Health Global community efforts and care coordination optimization required for valued-based reimbursement.

Options for bi-directional exchange will be configured to use current hospital electronic health care record platforms through EPIC's peer to peer CARE Everywhere model and/or have the opportunity to work with other software based models such as EDIE (Pre-Manage ED). In addition the EMS Agency is in the process of partnering with health care system providers to enhance options for real time dashboards and status screens, population based analytics supporting situation awareness in normal and catastrophic conditions

The EMS Agency is working with EMS System partners to enhance their capability to develop new initiatives between first responders, ambulance, hospitals and the health care community at large. Activities implementing bi-directional data exchange will be designed with the end-user in mind to enhance coordination of services matching patient need to health care resource while being sensitive to staff workflows by focusing on interfaces between data systems. In the new model data will be optimized to flow based on patient need. An EMS system infrastructure project of this scope will take some time but long term will bring significant opportunities to enhance patient care including options for community para-medicine and alternative mobile medical services.

Background and Significance

The 2013 Contra Costa EMS data system analysis produced three core deliverables that were intended to address a long-term strategic process of aligning and integrating EMS data systems with those of the patient's hospital medical record to enhance the

delivery of coordinated patient care services. As a result of that study Contra Costa EMS formed a Data Integration Working Group composed of interested stakeholders to explore solutions and next steps. That report also informed the Fitch EMS Modernization Study[1] and the 2015 ambulance RFP[2] data integration requirements.

The Working Group has been active since 2013 and was integral to the submission of a +EMS Local Assistance Grant Application in January 27, 2016. Although the CCEMS did not receive the award, our innovative peer to peer model using EPIC received praise from the California EMS Authority and the ONC.

Description of Area Served: CCEMS Operational Area Data

Enormous amounts of data are collected to support EMS operations in Contra Costa County. The EMS system provides coordinated emergency services for over 1.1 million people. Services are coordinated and delivered through public-private partnerships with Fire-EMS first responders trained at the basic or advanced life support level coupled with single-role paramedic and EMT staffed ambulances providing transport. The following are some of the operational area demographics as of 2015:

- The county consists of 802 square miles of rural, suburban, and urban communities.
- The population is ethnically and economically diverse.
- The operational area is served by eight (8) community hospitals with basic emergency department (ED) services.
- Five (5) of the eight (8) hospitals are designated STEMI and Cardiac Arrest Receiving Centers.
- Six (6) of the eight (8) hospitals are designated Stroke Receiving Centers.
- There is one (1) level II Trauma Center among the community hospitals.
- There are three (3) 9-1-1 ambulance providers in the county:
    - Moraga Orinda Fire Protection District provides 2% of all transports.
    - San Ramon Fire Protection District provides 6% of all transports.
    - American Medical Response provides 92% of all 9-1-1 transports.
- There are nine (9) BLS and CCT providers in the county.
- Since 2008, the community hospitals see approximately 400,000 ED patients per year.
- In 2015, the EMS system responded to 94,278 calls and transported over 73,064 patients.
- As of 2015, the Electronic Health Record (EHR) platform for all Contra Costa County community hospitals is Epic[3].
- As of 2016, Contra Costa Prehospital electronic Patient Care Record (ePCR) will be part of efforts to identify and reduce EMS and Emergency Department patients who are high utilizers.

[1] Link to EMS system Review Documents http://cchealth.org/ems/system-review.php#simpleContained3
[2] Link to EMS RFP process http://cchealth.org/ems/rfp.php
[3] San Ramon Medical Center utilizes Cerner EHR software, which is CARE Everywhere accessible.

HIE Solution and System Integration

Rather than using a traditional health information exchange organization (HIO), CCEMS has found that using an HIE environment supported by Epic's CARE Everywhere allows the system to achieve the same results while utilizing existing infrastructure. CARE Everywhere functions as an enterprise HIO supporting the exchange of information between unaffiliated entities. Although Contra Costa County's community hospitals are using Epic, each hospital's platform is unique. CARE Everywhere is the common conduit allowing for seamless transfer of a patient's health record between unaffiliated entities. CARE Everywhere also has the capability to include additional connections to other unaffiliated entities, including sub-acute and tertiary facilities that augment the County's acute care health system. Care Every-where's interoperability similarly supports specialty consultation between community hospitals and regional specialty centers such as UCSF and UC Davis.

- In 2010, Contra Costa Community Hospital Leadership individually selected Epic with the intent of regional interoperability supporting the potential for whole community HIE between the facilities as part of healthcare reform.
    - Kaiser is a legacy user of Epic throughout California.
    - Bay Area Sutter facilities are implementing Epic.
    - UCSF and UC Davis provide specialty services to partner hospitals and also use Epic as their EHR.
- Coalition partner Contra Costa Regional Medical Center (CCRMC) is the County's only regional hospital, which has 20 emergency department beds, and in 2015 served:
    - 49,197 ED encounters, averaging 134 patients per day.
    - Received 12,842 patients via EMS, representing 17% of all patients transported by ambulance.
- Coalition partner American Medical Response (AMR) serves 92% of the county and will continue to provide emergency ambulance services as a member of a new EMS service delivery model through Contra Costa Fire Protection District. In 2015 AMR Contra Costa:
    - Responded to 85,767 calls.
    - Transported 67,564 patients.
    - In 2015 AMR transported approximately 5,500 patients to CCRMC for Emergency Department treatment.
- CARE Everywhere, Epic's interoperability platform, exchanges patient data with other health institutions, HIEs, and government agencies on the eHealth Exchange (formally the Nationwide Health Information Network).

Coalition Preparedness: A Track Record of Engagement and HIE Readiness

CCEMS has over 25 EMS partners providing data to support the medical and system oversight of patient care delivery and the coordination of emergency medical services. The Contra Costa EMS System has mature Trauma, STEMI (ST Elevation Myocardial Infarction), Stroke and Cardiac Arrest systems of care and is an experienced participant in local, state, and national data registries, including Trauma One, State Core Metrics,

California Stroke Registry, Mission Lifeline, and CARES (Cardiac Arrest Registry to Enhance Survival).

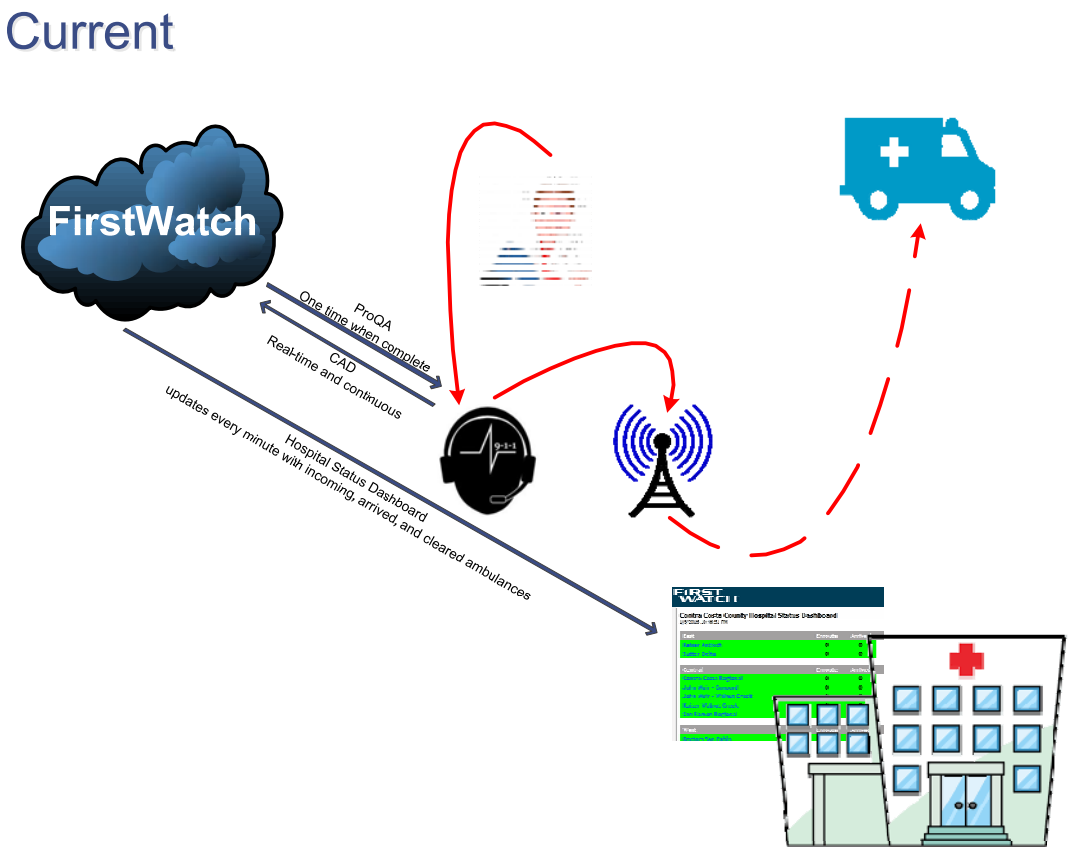


Figure 1. *Contra Costa County current HIE data infrastructure capabilities*

For the past five years, CCEMS has been using near real-time dashboard technology with FirstWatch to manage actual offload times between all EMS System community hospitals. All community hospitals routinely share patient information between facilities, private providers, and clinics through CARE Everywhere and Epic portals. Some additional elements depicting coalition preparedness are listed below:

- 90% of the 9-1-1 operational area is supported by a single prehospital EHR (MEDS). As of January 1, 2016, all in-county fire department first responder agencies have the option of using MEDS to support a single patient care record for each EMS encounter over the next 2-5 years.
- MEDS is currently NEMSIS 3.3 compliant and will be 3.4 compliant in early 2016.
- All EHR systems introduced by EMS providers must be NEMSIS 3.4 compliant by January 2017.
- HL7-ready EHR platforms have been available since 2014.
- FirstWatch Hospital Dashboard available for all in-county community hospitals.
- In 2015, Epic's recommendations for documenting EMS and patient transport (ASAP) were reviewed by CCEMS / CCHS / ccLink(Epic) and the HIE Working Group.

- In 2014, CCEMS collaborated with stakeholders and created a model Continuity of Care Document (CCD) with AMR and Kaiser which will be used for this project and includes the following data elements:

Patient Name	Receiving Hospital
Date of Birth	ED Arrival Time
Age	Patient Acuity
Ethnicity	ED Disposition
Race	Transferred to
Language of Preference	ED Disposition Time
Last 4 digits of SSN	ED Diagnosis (ICD 10)
Homeless?	Discharge Date and Time
Encounter ID	Discharge Disposition
Hospital Medical Record Number	Discharge Diagnosis (ICD 10)

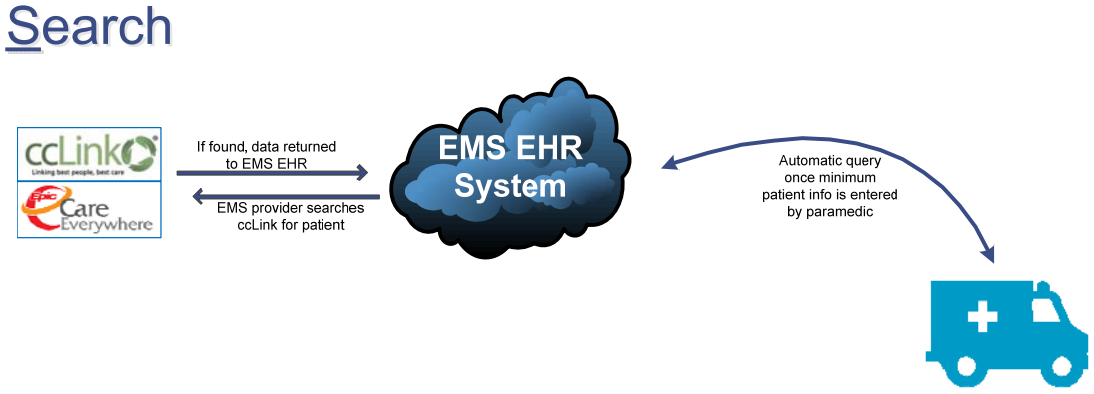
CCEMS and our partners are committed to developing the infrastructure required for our proposed solutions for each of the +EMS functions that will not require translation software. We understand that a tremendous amount of work will be required, but we are confident that our existing and proposed infrastructure and coalition partners will be successful in achieving each of the goals proposed while improving patient care, safety, and billing when compared to a traditional HIE.

Description of Proposed Work With Methodology For Achieving: Search, Alert, File, and Reconcile Functionality.

CCEMS is pleased to address each of the requirements for the four functions outlined within this proposal. Each of the functions, Search, Alert, File, and Reconcile are discussed in detail as projects below:

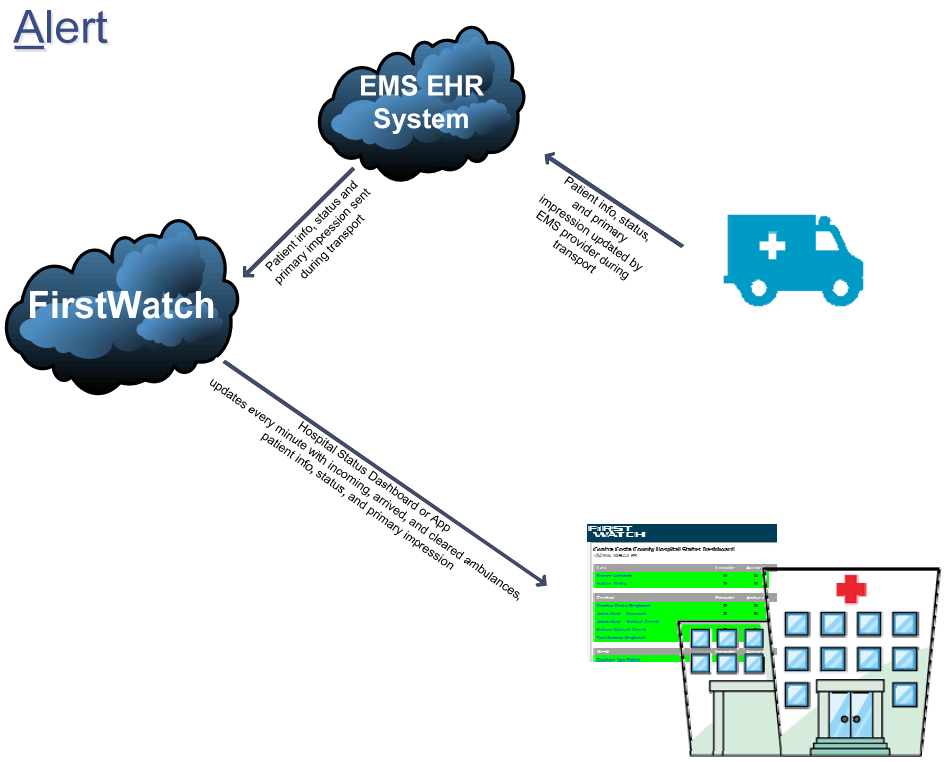
Proposed Search Function

Using CARE Everywhere's proven algorithm for patient matching and records return, the Search feature is designed to allow EMS providers to search for a limited data set such as health problems, medications, allergies, and advanced directives at the patient's side using demographic information. The intent of search is to streamline workflow by requiring Search to be accomplished within the prehospital EHR. Recognizing that human error is a significant factor in data entry, the proposed Search feature will validate through the proposed Reconcile feature.



Proposed Alert Function

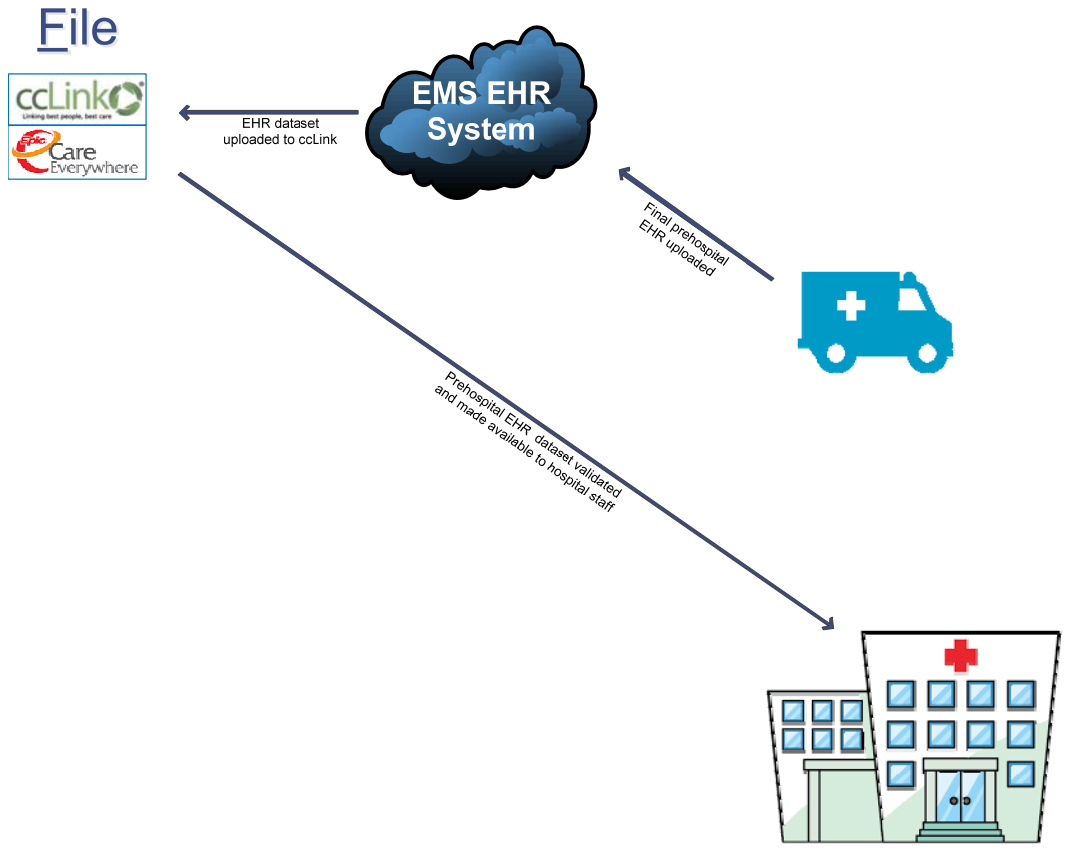
The Alert feature is designed to notify the receiving hospital that a patient is being transported by ambulance to their facility. This feature will include the patient's status and will be visually displayed to provide key patient metrics, including the paramedic's primary impression for the patient.



Proposed File Function

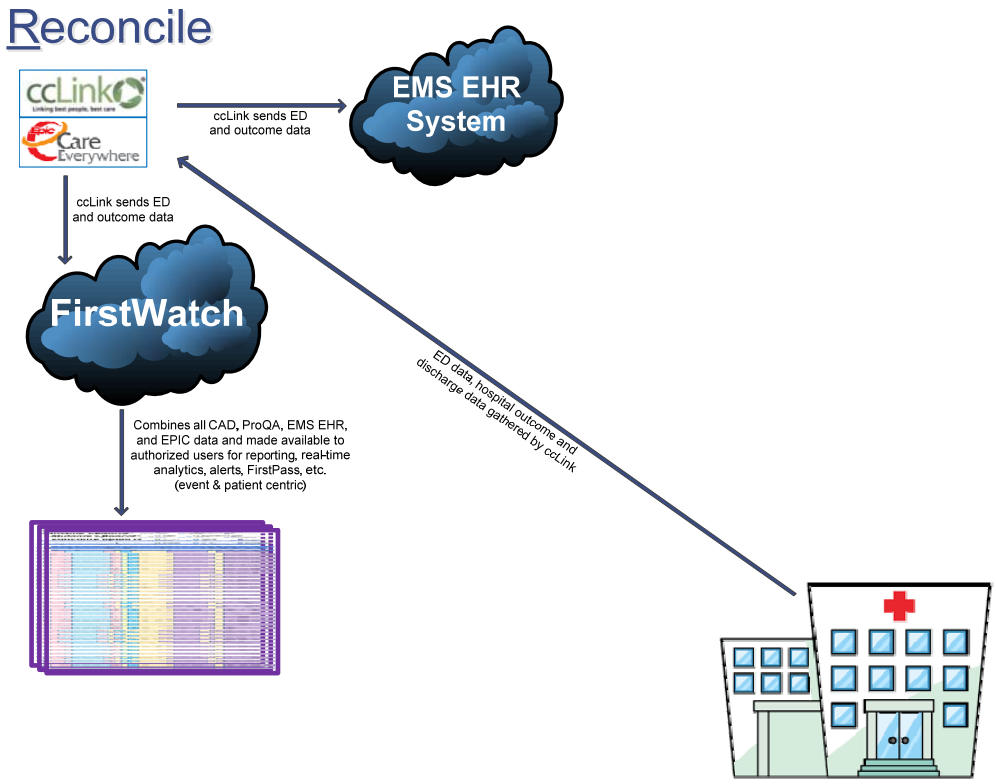
The File feature is designed to populate the prehospital EHR information into the longitudinal hospital EHR as discrete data. This feature will include more detailed

information than that previously transmitted through the Alert feature. The hospital user will have the ability to view and option to incorporate the prehospital EHR data into the hospital EHR.



Proposed Reconcile Function

Using proven methodology used by FirstWatch in Sedgwick County, Kansas, we propose leveraging proven solutions from all coalition partners for the Reconcile feature. It is designed to merge a comprehensive set of outcome and billing information from the patient's hospital EHR back into the prehospital EHR and FirstWatch's data set to allow for quality analysis, benchmarking, and system improvement. This feature will include detailed information such as patient insurance information, discharge diagnosis (ICD-10 code(s)), and length of stay, if applicable.



Summary

Please be advised that recent legislation AB503, AB1129, AB1223, and SB19 requires all Local EMS Agencies to plan, promote, and implement prehospital and emergency department bi-directional health care information exchange within the next 18months.

In preparation for health information exchange between local community hospitals and EMS System providers, the Contra Costa EMS Agency advises the following:

- All EMS transport agencies permitted in Contra Costa County must be capable of sending a prehospital continuity of care document (CCD) directly to the receiving hospital's medical records system no later than January 2018.
- All community hospitals in Contra Costa County must be capable of consuming a prehospital electronic health record (EHR) CCD no later than January 2018.
- All prehospital EHRs must be compliant with new state EMS Data system requirements as specified in the January 5, 2016 California EMSA letter.

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To learn more about local EMS Health Information bi-directional exchange efforts please contact Contra Costa Emergency Medical Services. To learn more about state and national EMS and Health System bi-directional exchange please visit http://www.emsa.ca.gov/HIE.

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY EDMUND G. BROWN JR., *Governor*

EMERGENCY MEDICAL SERVICES AUTHORITY
10901 GOLD CENTER DR., SUITE 400
RANCHO CORDOVA, CA 95670
(916) 322-4336 FAX (916) 324-2875

DATE: January 5, 2016

TO: Local EMS Administrators
EMS Medical Directors
EMS Providers
Other EMS System Stakeholders

FROM: Howard Backer, MD, MPH, FACEP
Director

SUBJECT: New State EMS Data System Requirements

Recent legislation, in addition to multiple data initiatives, is driving rapid changes in EMS data systems at the local, state, and national levels. The EMS Authority is providing this guidance to local EMS agencies, EMS providers, and other stakeholders to clarify their responsibilities related to data and quality during 2016.

EMSA has made data quality and analysis a priority over the past 3 years. Stakeholders in the EMS system recently have engaged in discussions with EMSA regarding the strategy and changes around data collection and evaluation. In addition, EMSA recently formed a data advisory group consisting of three local EMS agency administrators and an equal number of medical directors to help determine a cooperative strategy for improving EMS data and its application. The continuation of funding from the Office of Traffic Safety for local data collection efforts and movement to NEMSIS 3.x, the development of EMS performance improvement measures (Core Measures) through one-time funding from the California HealthCare Foundation (CHCF), and the recent grant from the Office of the National Coordinator for Health Information Technology (ONC) to implement local health information exchange projects (Patient Unified Lookup System for Emergencies +EMS) have enhanced data and quality efforts.

In addition, four bills were passed by the legislature and signed by the Governor during 2015 related to data, quality, and the electronic movement of health information: AB503, AB1129, AB1223, and SB19.

EMSA plans to open the California Code of Regulation, Title 22, Division 9, Chapter 12, EMS System Quality Improvement regulations for amendments to implement the newly enacted sections of AB503, AB1129, AB1223 and SB19. This revision would update the regulations to appropriately address data and quality improvement. We will reach out to EMS stakeholder groups to establish a representative task force to assist us in this effort.

While the regulatory process is lengthy, the requirements of the legislation took effect January 1, 2016. Therefore, until the regulations are revised, the following information is provided to local EMS agencies and EMS providers to support the statutory requirements.

Implementation of AB1129 -- Health and Safety Code 1797.227

AB 1129, effective January 1, 2016, requires among other provisions that:

1. Each emergency medical care provider uses an electronic health record;

2. The electronic record must be compliant with the current version of NEMSIS and CEMSIS.

For the purposes of this guidance, an *emergency medical care provider* is an entity that is authorized as part of an EMS system by the local EMS agency. At a minimum, every ambulance transport provider (both emergency and non-emergency, including BLS, LALS, and ALS) and every advanced or limited advanced life support entity would fit this definition. Some Local EMS agencies also have specific local system design characteristics involving BLS non-transport first responder entities that also meet this definition.

For the purposes of interpreting the provisions of AB1129, EMSA recognizes that "electronic health record" means electronic Patient Care Report (ePCR). An *electronic health record (EHR)*, as defined by the Office of the National Coordinator for Health Information Technology (ONC), is a digital version of a patient's paper chart. Further, ONC notes:

> "EHRs are real-time, patient-centered records that make information available instantly and securely to authorized users. One of the key features of an EHR is that health information can be created and managed by authorized providers in a digital format capable of being shared with other providers across more than one health care organization."

To meet this definition, the electronic health record must have the capability of mobile entry at the patient's bedside, and incorporate workflow for real-time entry of information. This also means that all EHR systems should be interoperable with other systems, including the functionality to exchange (send and receive) electronic patient health information with other entities, including hospitals, in an HL7 format, using ONC standards. NEMSIS 3 incorporates these format standards.

AB1129 requires that, electronic health record systems must be compliant with the "current version of NEMSIS". The current version of NEMSIS is version 3.3.4 or version 3.4. The sunset date for version 3.3.4 is August 31, 2016. Compliant means a system that has been tested and certified "compliant" by NEMSIS; this certification information is posted on the NEMSIS website at *http://www.nemsis.org/v3/compliantSoftware.html.*

A local EMS agency may not mandate that a provider use a specific EHR system, but the EMS provider must use a system that "can be integrated" with the LEMSA system. Therefore, the local EMS agency may require the EMS provider to demonstrate, test, and ensure that the proposed system is compatible with the local EMS agency system at the provider's cost without a heavy reliance on mapping. The specific system mandate prohibition does not affect agreements in place by January 1, 2016.

Compliance with CEMSIS is determined by meeting any additional requirements by EMSA or California specific criteria that expand or limit the responses for any NEMSIS elements. These will be specified in a subsequent memo or guidance anticipated to be released by April 1, 2016.

NEMSIS Version 3.4:

All EMS systems must have a NEMSIS 3.4 compliant system in operation no later than midnight on December 31, 2016. California will use the NEMSIS Version 3.4 as our base data standard effective January 1, 2017. This will allow California to be consistent with the most current version of the national data standard and with AB1129.

The National Highway Safety Administration (NHTSA) and University of Utah have put a final sunset date on the use of NEMSIS Version 2. The submission of NEMSIS Version 2 will conclude at midnight on December 31, 2016 with no further time extension allowed.

Implementation of AB 503 – Health and Safety Code 1797.122:

This bill authorizes a health facility to share patient-identifiable information with a defined EMS provider, local EMS agency, and EMSA. This clarifies the California health information privacy law to be consistent with HIPAA, which already allows sharing of treatment, payment, and operations information between covered entities, and also specifies that local EMS agencies and EMSA may receive this information for quality improvement. The intent is to share outcome information on patients to support quality evaluation and performance improvement and the use of health information exchange. This will also enhance the annual EMS Core Measure reporting.

As allowed in the bill, EMSA will set the "minimum standards for the implementation of data collection, including system operation, patient outcome, and performance quality improvement." These standards will be incorporated into revisions of Chapter 12.

Implementation of AB 1223 – Health and Safety Code 1797.120 and 1797.225:

This bill requires EMSA to adopt standards related to data collection for ambulance patient offload time.

Interim guidance will be developed by EMSA, in collaboration with local EMS agencies, on statewide standard methodology for the calculation and reporting of ambulance patient offload time. Regulation revisions will propose to incorporate the methodology found in the interim guidance.

Implementation of SB 19 – Probate Code 4788:

This bill enacts the California POLST eRegistry Pilot Act. The bill requires the Emergency Medical Services Authority to establish a pilot project, in consultation with stakeholders, to operate an electronic registry system on a pilot basis, to be known as the California POLST eRegistry Pilot, for the purpose of collecting POLST information received from a physician or physician's designee, if non-state funding is received.

The bill requires EMSA to coordinate the development of the POLST eRegistry Pilot, which would be operated by health information exchange networks, by an independent contractor, or by a combination thereof. The main model envisioned for the registry is dependent on use of electronic health records by EMS personnel (as required in AB 1129), and transition to a NEMSIS 3 platform, to link those records to electronic medical records within health systems to send, receive, find, and use POLST information.

Many individuals throughout our EMS system are excited about the potential for increased data quality and consistency, which will lead to new opportunities to evaluate, understand, and improve our EMS system at all levels.

Please contact either Tom McGinnis at Tom.mcginnis@emsa.ca.gov 916-431-3695 or Kathleen Bissell at Kathy.bissell-benabides@emsa.ca.gov 916-431-3687 with any questions concerning this memo.

William B. Walker, M.D.
HEALTH SERVICES DIRECTOR

Pat Frost
EMS DIRECTOR

David Goldstein MD
EMS MEDICAL DIRECTOR
DEPUTY HEALTH OFFICER

CONTRA COSTA
HEALTH SERVICES

Contra Costa
Health Services
Emergency Medical Services
1340 Arnold Drive, Suite 126
Martinez, CA 94553-1631
Ph (925) 646-4690
Fax (925) 646-4379

October 31, 2016,

Dear Contra Costa County Community Hospital Executives; Emergency Department Physician and Nurse Leadership, Fire- EMS, Ambulance, and EMS System Stakeholders,

Recent legislation requires all EMS Agencies to plan, promote, and implement prehospital and emergency department bi-directional health care information exchange within the next 18 months. In preparation for this exchange between local community hospitals and EMS System providers, the Contra Costa EMS Agency advises the following:

- All EMS transport agencies permitted in Contra Costa County must be capable of sending a prehospital continuity of care document (CCD) directly to the receiving hospital's medical records system no later than January 2018.

- All community hospitals in Contra Costa County must be capable of consuming a prehospital Electronic Health Record (EHR) CCD into their electronic medical record system no later than January 2018.

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

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Bi-directional health information exchange compliance requirements are described in the California EMS Authority letter dated January 5, 2016. A summary of the Contra Costa EMS bi-directional exchange efforts to date and plans for the future is also being included with this memo. If you have questions or would like to learn more please contact us.

Respectfully,

Patricia Frost RN, MS, PNP

Cc: William Walker MD, Health Officer
David Goldstein MD, EMS Medical Director

Attachments: EMSA January 5, 2016 New State EMS Data System Requirements
Contra Costa EMS System HIE Summary

HSAG HEALTH SERVICES ADVISORY GROUP

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,

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