California EMS Authority HIE Team

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EMS Systems Division Chief

EMS Data Manager:
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Disaster Medical Coordinator:
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Office of the National Coordinator
Health Information Exchange Grant

- $2.75 million to develop technology, infrastructure, policies and agreements that enable interoperable, bidirectional HIE between multiple HIOs during a disaster and between EMS, HIOs, and hospitals in daily EMS operations.

- Term: July 27, 2015 – July 26, 2017

- Milestones: Adoption, Interoperability, Exchange
  - Connectivity and exchange between at least four existing HIOs
  - Connectivity and exchange between ePCR and EHR in at least two LEMSAs
**Vision:** EMS is a full participant in health information exchange with the ability to securely send, receive, find and use relevant patient information.

**Path:** Support technical and administrative infrastructure development to enable EMS providers and hospitals to securely share electronic patient information via health information organizations.

**Rationale:** Better patient care, outcomes and experiences; more complete longitudinal patient record; greater ability to aggregate and analyze system data; and more resilience in the face of disasters.
Patient Unified Lookup System for Emergencies

**PULSE**

- PULSE will connect multiple data sources to an interoperability broker
- using exchange specifications, direct secure messaging and federated directory services
- enabled by the California Trusted Exchange Network (CTEN) following “Integrating the Healthcare Enterprise” (IHE) standards
- accessed via several user interfaces created for different purposes and user types

**PULSE+EMS**  **PULSE+EHR-Link**  **PULSE+DHV**
• HIEs, HIOs, Health Systems

+ DHV

• Disaster Healthcare Volunteers (DHV) access to patient records from alternate care sites

+ EHR-link

• Hospital staff access to remote HIOs for EHRs on patients displaced during a disaster

+ EMS

• Search
• Alert
• File
• Reconcile

• Hospitals, physicians, labs, imaging, pharmacies
PULSE+EHR-Link

During disasters patients may be transported to a hospital outside the affected area for treatment.

- Establish pre-existing connectivity with participating HIOs that would be “turned on” under disaster declaration scenarios.
- Emergency department personnel may find health information for a relocated patient directly from EHR screen.
PULSE+DHV

Provides access to patient health information for health care workers in alternate care sites.

- Web portal activated during a disaster
- 21,000 disaster health care personnel will have access
- Secure sign-on technology
- Health care professionals would be able to access patient records through their existing employer or HIO systems, or through a web portal.
<table>
<thead>
<tr>
<th>S</th>
<th>SEARCH:</th>
<th>PARAMEDICS and EMTs may look up and display patient problem list, medications, allergies, POLST and DNR in field on ePCR screen</th>
<th>Improve clinical decision making Improve patient care</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>ALERT:</td>
<td>Display patient Information on hospital dashboard at ED to alert and share incoming patient information to assist in time-sensitive therapies</td>
<td>Improve decision support Better transitions of care Improve patient care</td>
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<tr>
<td>F</td>
<td>FILE:</td>
<td>Incorporate ePCR data into hospital EHR in HL7 format (using NEMSIS 3.4 CDA standards)</td>
<td>Build better longitudinal patient record</td>
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<tr>
<td>R</td>
<td>RECONCILE:</td>
<td>Receive patient disposition information from hospital EHR to add to EMS provider patient record</td>
<td>Improve population health</td>
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</table>
HIO searches via PULSE and sends data to ePCR

ePCR requests limited data set on patient from CHIO

ED may send instructions to EMS while on-scene or enroute

ED sends patient information to ED while on-scene or enroute

EDR sends outcome data to ePCR at conclusion

EHR sends patient data for merge into to EHR

ePCR sends patient data to merge into EHR

EHR receives and incorporates close-out data from EHR

ePCR receives and incorporates close-out data from EHR
Working Assumptions

- EMS Providers have ePCR systems that are NEMSIS 3 Compliant
- Utilize HL7 language with the NEMSIS CDA
- EHRs are modified to incorporate patient data from an ePCR
- Hospitals are willing to accept ePCR data into their EHR
- Work with Community Health Information Organizations (HIOs) as the information hub
- Match EMS providers and EMS receiving hospitals
- All parties sign the California Data Use and Reciprocal Support Agreement (CalDURSA)
Two-Year Budget Breakdown

- **Total Project Budget:** $3,668,904
- **Federal Share:** $2,751,678 (Disbursed at milestones)
- **Non-Federal Share:** $917,226 (matching dollars)
- **Contractual:** $2,281,522
- **Personnel:** $325,440 (Project Coordinator and .5 FTE Grant Analyst)
- **Travel:** $42,756 (Advisory Committee, Site Visits, ONC Grantee Meetings)
- **Other:** $98,960 (HIE in EMS Conferences, Advisory Committee)
- **Supplies:** $3,000
Contracts

- Program Planning and Compliance at EMSA
- Contractual Services
  - 1 Contract Technical Advisor services (RFO out now)
  - 1 Contract to build PULSE technical interoperability based upon PULSE architecture (SSO, SAML2)
  - Minimum of 4 HIO Contracts for PULSE Interoperability and Exchange
  - 1 Contract for DHV Interface (SSO, SAML2)
  - Minimum of 2 Contracts for local +EMS implementation (HIO, 9-1-1 ambulance provider, hospital)

*All contracts will follow federal and state procurement policies and requirements*
QUESTIONS?

www.emsa.ca.gov/HIE

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