



2018^{ANNUAL} Member Meeting

OCTOBER 25, 2018

Gaylord National Harbor, MD

When Disaster Strikes

Supporting Disaster Response




Our Panel



- Nora Belcher, Executive Director, Texas eHealth Alliance
- Kristen Finne, Program Manager, emPOWER and Senior Program Analyst Assistant Secretary for Preparedness and Response
- Leslie Witten-Rood, Program Manager, California Emergency Management Services Authority
- Mariann Yeager, CEO, The Sequoia Project

An Introduction to PULSE

Why Do We Need PULSE?



DEPARTMENT OF HEALTH & HUMAN SERVICES

OFFICE OF THE SECRETARY

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[Http://www.hhs.gov/ocr/](http://www.hhs.gov/ocr/)

Director
Office for Civil Rights
200 Independence Ave., SW Rm 506F
Washington, DC 20201

September 9, 2005

**U.S. Department of Health and Human Services Office for Civil Rights
HURRICANE KATRINA BULLETIN #2:**

**HIPAA Privacy Rule Compliance Guidance and Enforcement Statement
For Activities in Response to Hurricane Katrina**

Background

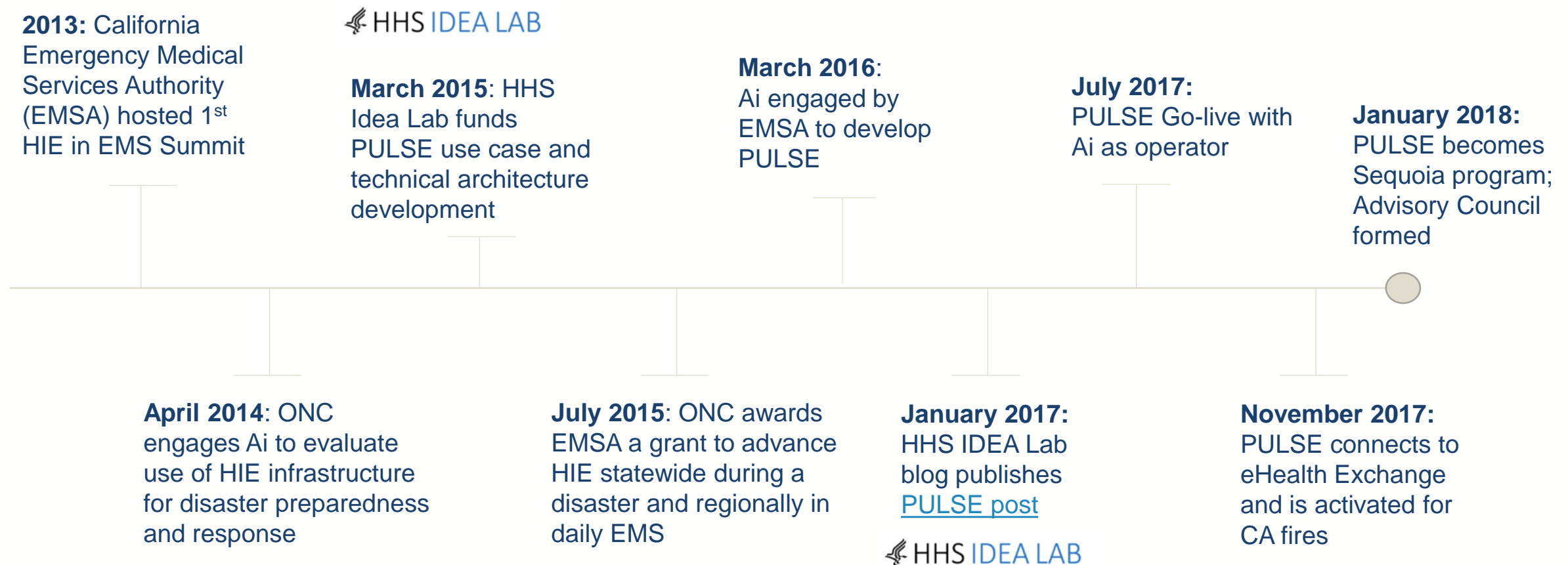
Hundreds of thousands of evacuees from areas affected by Hurricane Katrina have been relocated to shelters across the country. For many, an important need is to identify and provide prescription medications. However, medical and prescription records of many evacuees either are lost or inaccessible.

Health plans and health care providers are working together with other industry segments to gather and provide this information to the appropriate points of care for the evacuees. The information below provides guidance on how the HIPAA Privacy Rule applies to these activities, as well as describes the HHS Office for Civil Rights' enforcement approach in light of these emergency circumstances.

Compliance Guidance

The *Hurricane Katrina Bulletin: HIPAA Privacy and Disclosures in Emergency Situations* (attached), issued by OCR, emphasizes the broad range of permissible disclosures that covered entities may make to respond to the needs of evacuees in these situations. For example, health plans and health care providers may disclose prescription and other health information to health care providers at shelters to facilitate treatment of the evacuees.

History



PULSE Advisory Council

- Nora Belcher, Texas e-Health Alliance (TEHA)
- Rim Cothren - California Association of Health Information Exchange (CAHIE)
- Tara Cramer Georgia Regional Academic Community Health Information Exchange (GRACHIE)
- Kristen Finne, HHS Assistant Secretary of Preparedness and Response (ASPR)
- Dan Smiley, California Emergency Medical Services Authority (CalEMSA)
- Lee Stevens, HHS Intergovernmental and External Affairs (IEA)
- Sean Turner, Dignity Health
- Leslie Witten-Rood, California Emergency Medical Services Authority (CalEMSA)
- Jeremy Wong, Audacious Inquiry (Ai)

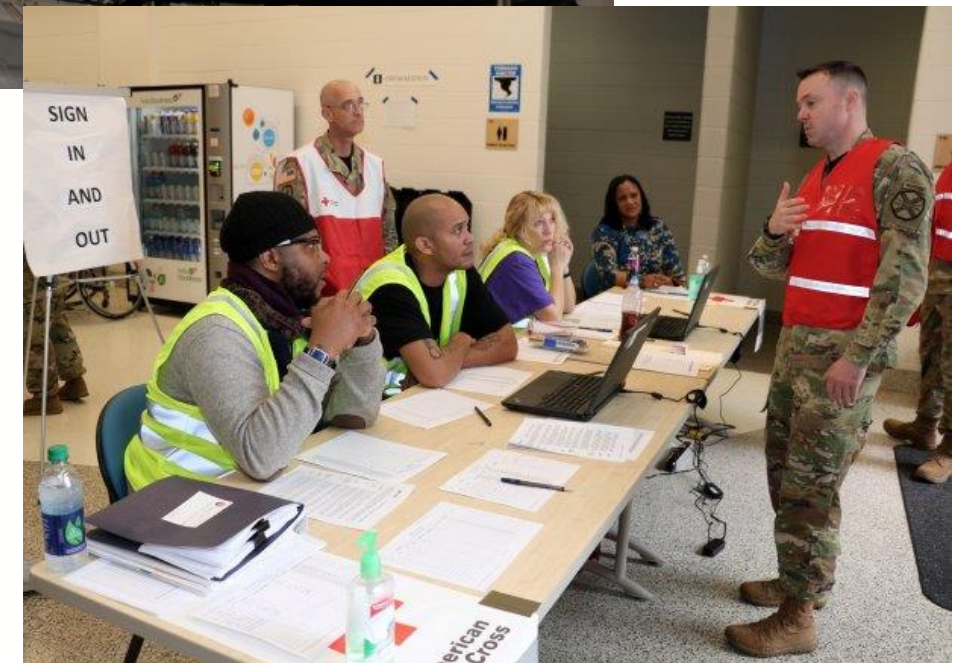


Patient Unified Lookup System for Emergencies



What Does PULSE Do?

Provides volunteer access to health records to treat patients seeking care in Alternate Care Facilities

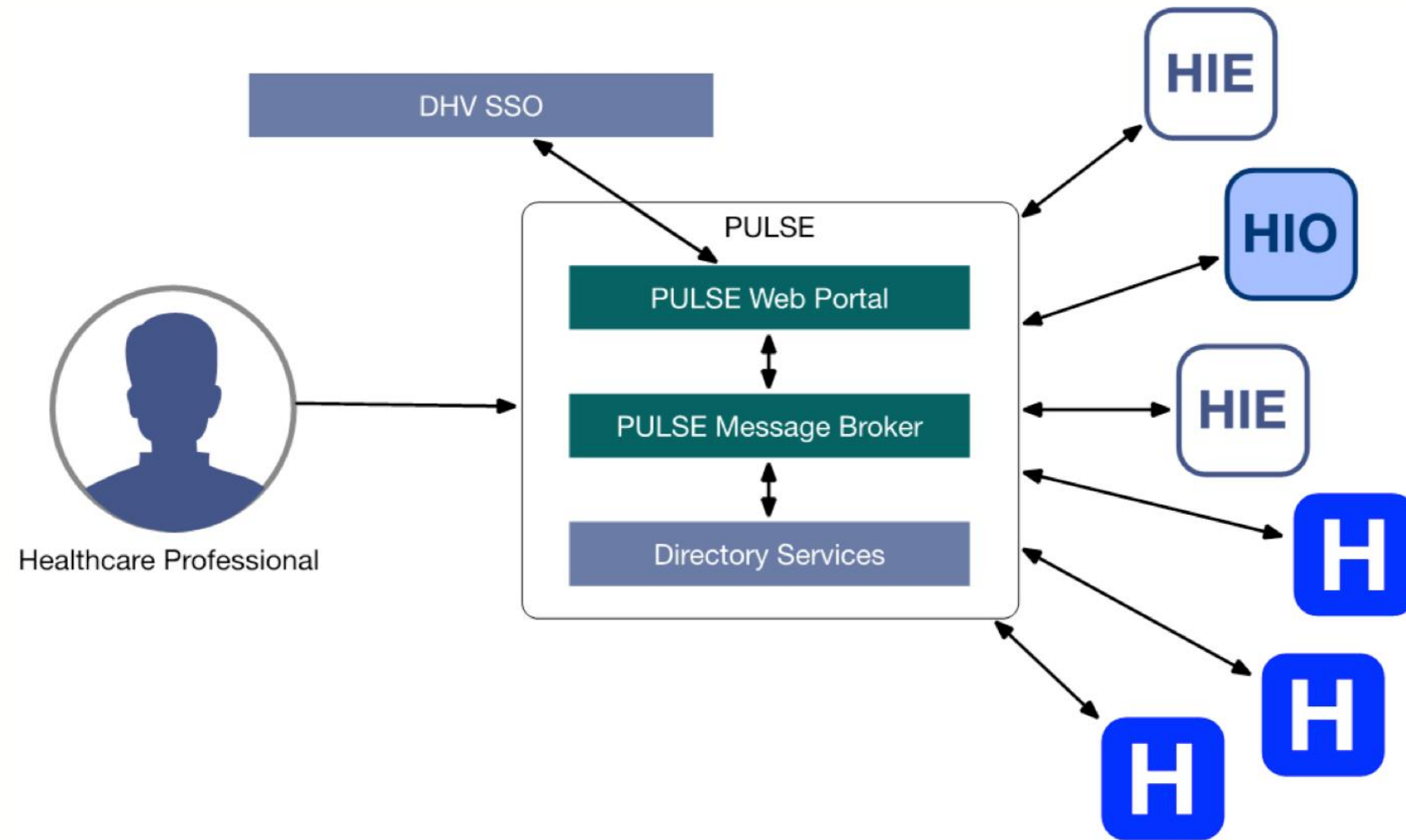


How Does PULSE Work?

- Disaster Healthcare Volunteers report to assigned facility
- Volunteers log into PULSE portal using state credentials
- PULSE authenticates user against state's database
- Volunteers search and view records from connected providers and networks

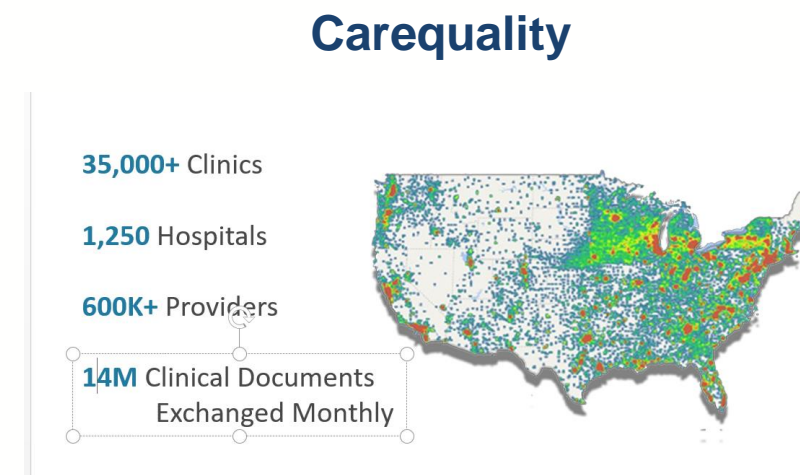
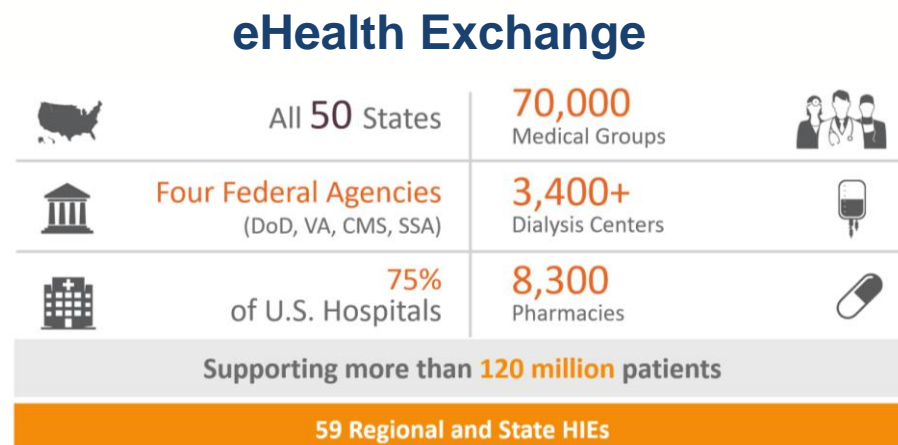


Technical Architecture



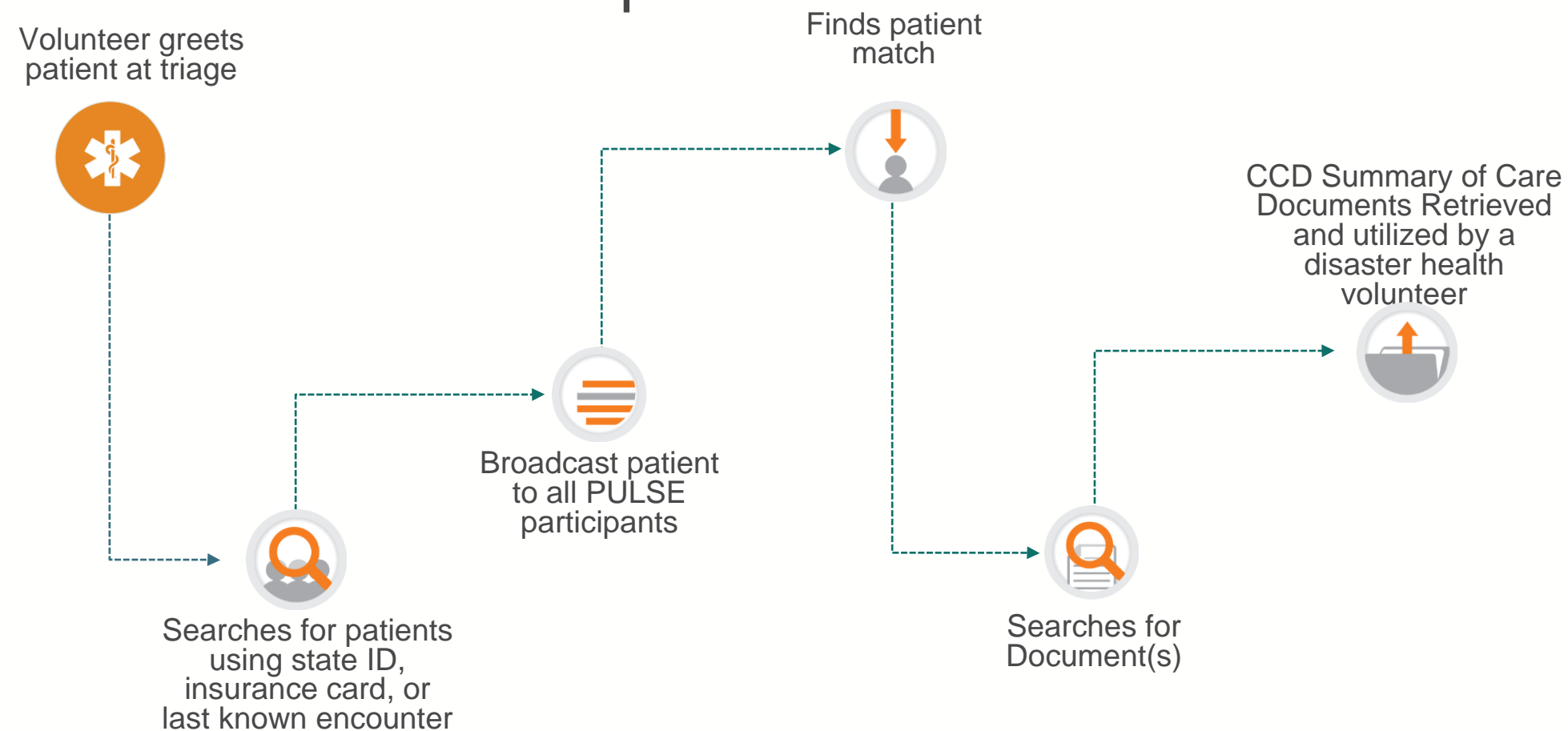
PULSE Connects to Nationwide Networks

- Already connected to eHealth Exchange network, with California connections, and ability to connect nationwide
- Connectivity will be expanded through Carequality

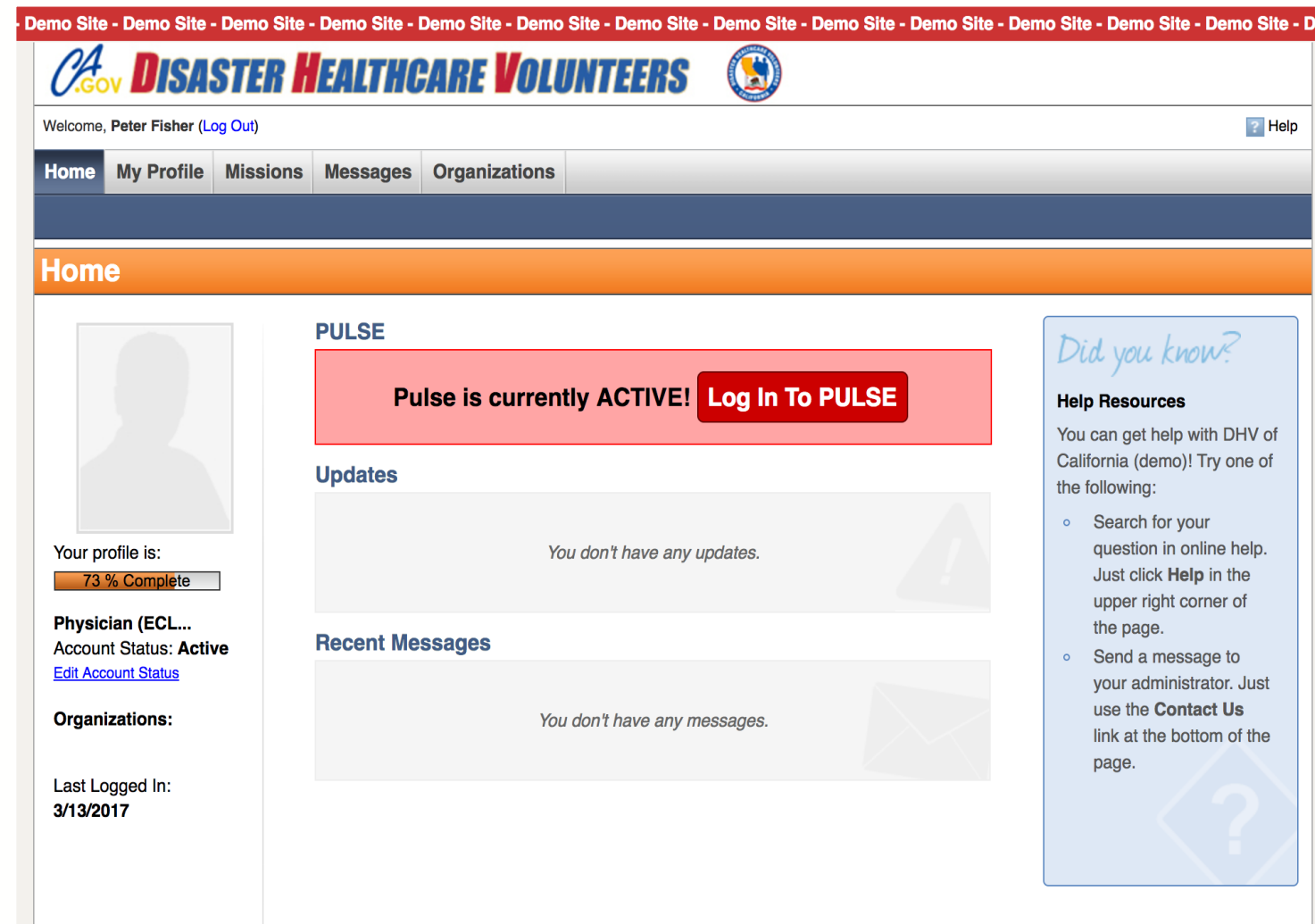


Sample Workflow

Triaging Patients Seeking Treatment at a Field Hospital



DHV Single Sign-On



Select ACF



 Peter Fisher ▸

Select an Alternate Care Facility (ACF)

Select an ACF

Orange ▾


07 Evacuation Zone ▾


Submit

About PULSE

ONC has funded the development of the Patient Unified Lookup System for Emergencies (PULSE) to ensure vital health information can be shared and used during disasters. California Emergency Medical Services Authority (EMSA) and Audacious Inquiry (AI) developed PULSE to prepare for disasters and connect healthcare across California.


[Access Developer Resources](#)

The Office of the National Coordinator for Health Information Technology

EMSA
EMERGENCY MEDICAL SERVICES AUTHORITY
CALIFORNIA

Patient Query



 Peter Fisher ▶

Search

Review

Patient Query

First Name *

Steve

Last Name *

Hardy

Gender *

Male

Date of Birth *

April

1

1963

SSN

XXX-XX-XXXX

Search 

Queries (0)

Queried Patient Information

No current queries

Patient Staging

Patient Staging

Queried Patient Information

Name	Gender	Date of Birth
Steve Hardy	M	04/01/1963

Possible Patient Records

Location	Name	Gender	Date of Birth	SSN	View Details	Select
Mock Clinic Facility 1	Steve James Hardy	Male	04/01/1963	999-88-6345	<button>Q</button>	<input checked="" type="checkbox"/>
Mock Hospital Facility 1	Steve James Hardy-Smith	Male	04/01/1963	999-88-6345	<button>Q</button>	<input checked="" type="checkbox"/>
	Steve Jim Hardy	Male	04/01/1963	999-89-3300	<button>Q</button>	<input type="checkbox"/>
Mock Hospital Facility 2	Steve James Hardy	Male	04/01/1963	999-88-6345	<button>Q</button>	<input checked="" type="checkbox"/>
	Jim Steve Hardy	Male	04/01/1963	999-89-3300	<button>Q</button>	<input type="checkbox"/>
Mock IDN Facility 1	James Steve Hardy-Smith	Male	04/01/1963	999-88-6345	<button>Q</button>	<input checked="" type="checkbox"/>
Mock IDN Facility 2	James Steve Hardy-Smith	Male	04/01/1963	999-88-6345	<button>Q</button>	<input checked="" type="checkbox"/>

Combined PULSE Patient

Full Name *

Friendly Name

Gender *

SSN

Date of Birth *

Steve Hardy


Male

April

1

1963

Document List



Patient Unified Lookup System for Emergencies

Contra Costa-01

Peter Fisher

Log Out

Show Location Status

Search

Review

Patient: John Smith

John Smith

Edit

Discharge

Deactivate




Gender

M


Date of Birth

Jun 5, 1966

SSN

Status	Title	Class Name	Confidentiality	Creation Date	Size	Location
	Hospital Admission	ALLERGY NOTE	High	May 15, 2008	34.6 kB	St. Sebastian's Hospital
	Hospital Admission	ALLERGY NOTE	High	May 15, 2008	34.6 kB	Santa Rosa Mental Health Institute
	Physical Exam	SUMMARIZATION OF EPISODE NOTE	Normal	May 15, 2008	34.6 kB	St. Sebastian's Hospital

Clinical Document Review



Patient Unified Lookup System for Emergencies

Contra Costa-01

Peter Fisher

Log Out

Show Location Status

ALLERGIES, ADVERSE REACTIONS, ALERTS

Type	Substance	Reaction	Status
ALLERGIES	morphine	rash	Active
ALLERGIES	amoxicillin	anaphylaxis	Active
ALLERGIES	metronidazole	difficulty breathing	Active
ALLERGIES	Macrolide Antibiotics Group	nausea	Active

MEDICATIONS

Medication	Start Date	Route	Dose	Status
Abilify, „[RxNorm:352309]	20150102000000			Active
Crestor, „[RxNorm:859749]	20150101000000			Active
Sucraid, „[RxNorm:213337]	20150217000000			Active
Dilantin, „[RxNorm:855871]	20150216000000			Active

PROBLEMS

1. Alteration in Mood[Status:Active]

California PULSE

Leslie Witten-Rood
Program Manager
California Emergency Management Services Authority

STATE OF CALIFORNIA EMERGENCY MEDICAL SERVICES AUTHORITY

Patient Unified Lookup System for Emergencies (PULSE)

Presented by Leslie Witten-Rood
Leslie.Witten@emsa.ca.gov



PULSE General Background

- Idea/concept came from experiences during Katrina (i.e., Katrina Health)
- April 2014 - ONC published a report that assessed opportunities in CA and Gulf Coast to use HIE to support Disaster preparedness and EMS.
 - The report identified two scenarios: 1) EMS data exchange with hospitals and 2) development of a disaster response medical history portal (PULSE)
- May 2014 - ASPR and ONC received a \$50,000 grant from HHS Ventures and 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

IDEA Lab in Action - California

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



PULSE Patient/Provider Landscape

Statewide Project in California

58 Counties and 53 Congressional Districts

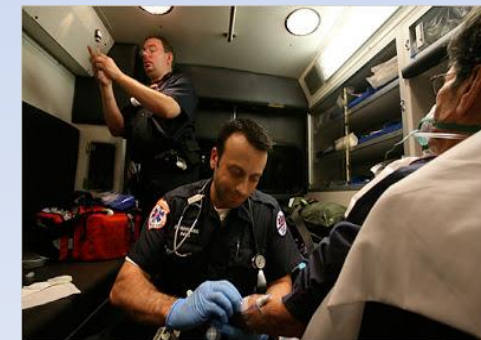
Target Populations:

- All victims experiencing a medical or trauma emergency served by EMS
- Displaced Victims of Disasters

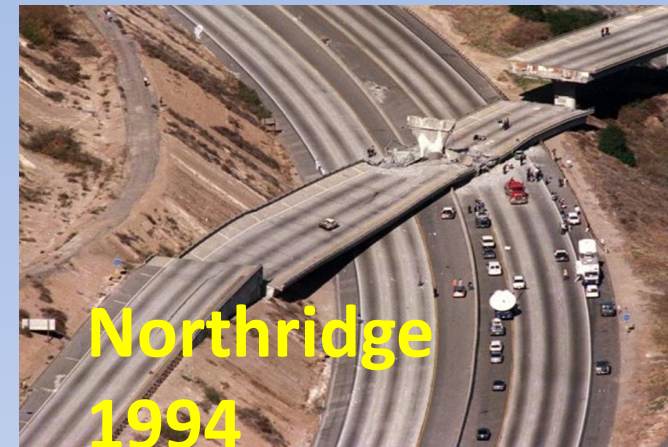


Providers & Practices:

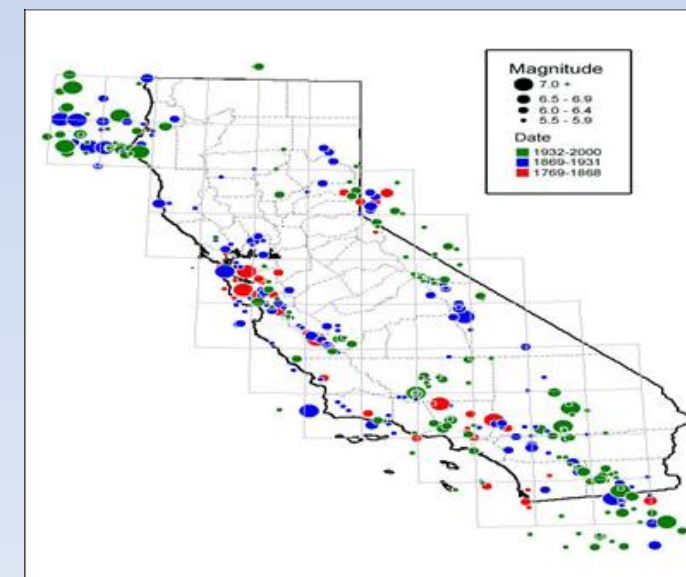
- Paramedics and EMTs
- Physicians in Emergency Departments
- Physicians working in a Mobile Field Hospital or Alternate Care site
- Nurses
- Pharmacist



Earthquakes in California

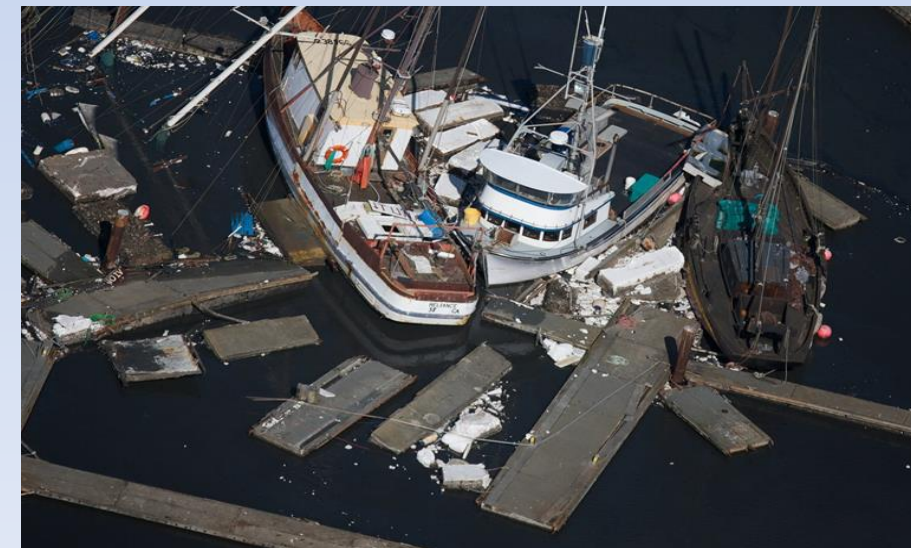
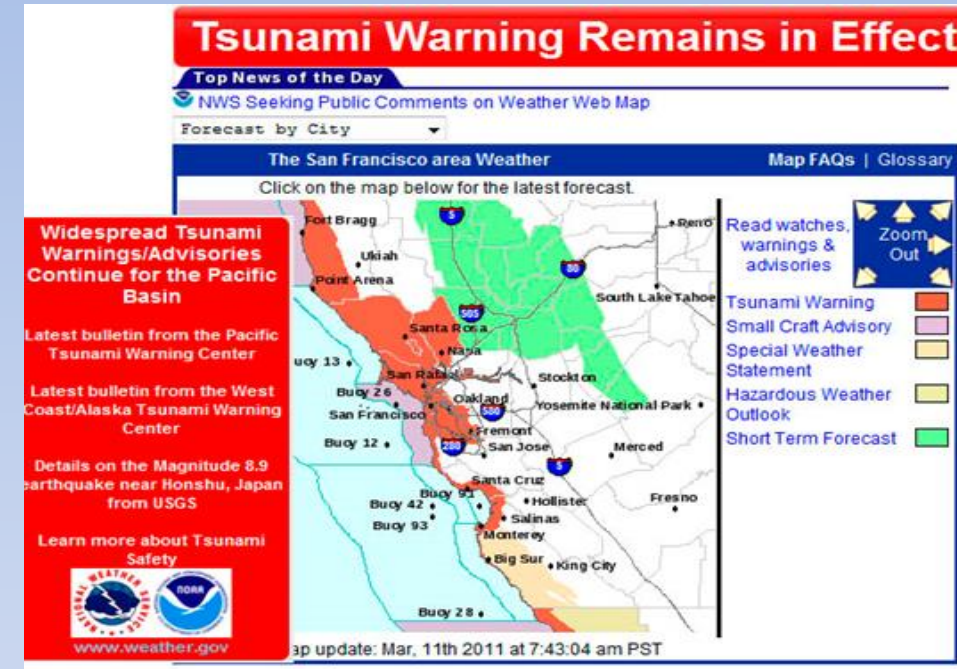


Earthquakes
Measuring 5.5 to 7.0+
from 1769 to 2000



March 2011 Tsunami

Del Norte, Humboldt, San Mateo, & Santa Cruz



February 2017 Flood Evacuations

Oroville, California



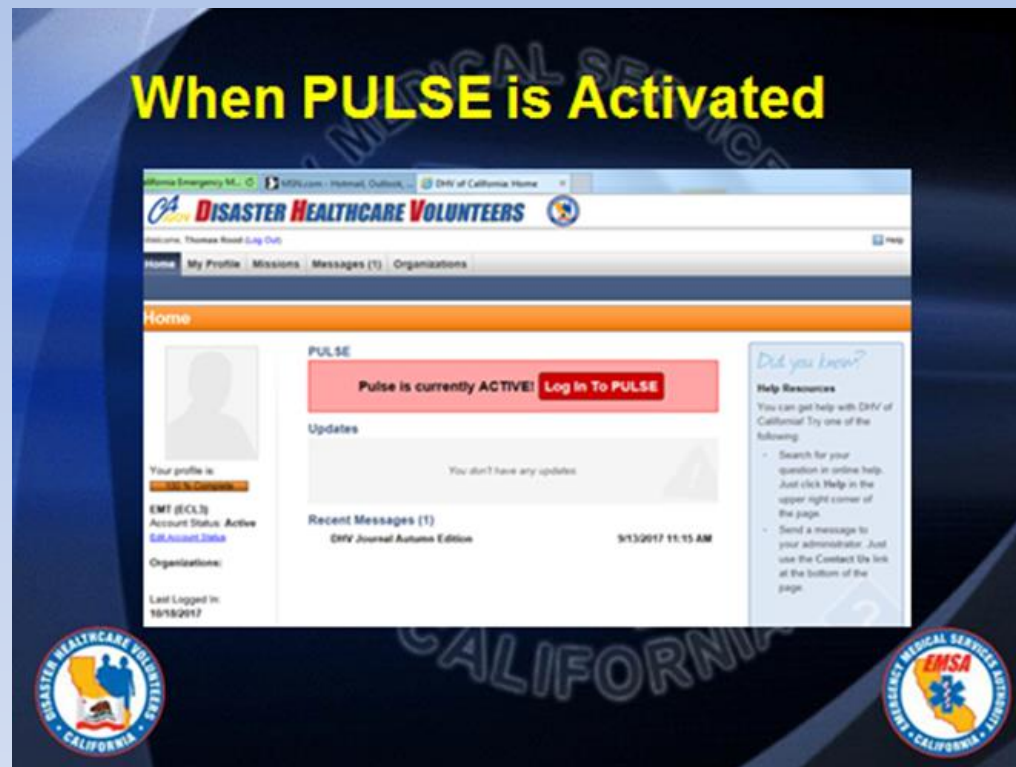
California PULSE Pilot Design

- 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

Late June 2017 PULSE Table Top Drill

- Test the PULSE System are (Vendor Audacious Inquiry)
- Ensure connections with four health information organizations (HIOs)
 1. OCPRHIO
 2. Santa Cruz HIE
 3. Sutter Health
 4. UC Davis Health
- Testing connectivity of the DHV System (Vendor Intermedix & Directory Services as part of the California Trusted Exchange Network (CTEN), operated by CAHIE
- Received end user feedback from the Sacramento Medical Reserve Corps and Sacramento County

Fall 2017 PULSE Implementation



- Roles & Responsibilities
- Develop Workflow
- Update Key Planning & Deployment Documents
- Communication
- Train end users
- Asset Request Process
- Deployment

2017 Wildfires Statewide

October through December



- EMSA partnered with the Sequoia Project to increase Geographic Coverage for PULSE
- PLUSE was successfully connected to eHealth Exchange

October 2017 Wildfires

Napa & Sonoma



- Over 250 Major Wildfires
- 1.3 million Acres Burned
- 9,470 Structures Destroyed
 - Approx. 5,000 Residential Destroyed
- 47 Lives Lost
- Includes 5 of the 20 most destructive fires in CA history







Both Kaiser and Sutter Hospital had to be evacuated in Sonoma County

Principles of Disaster Medical/Health Operations

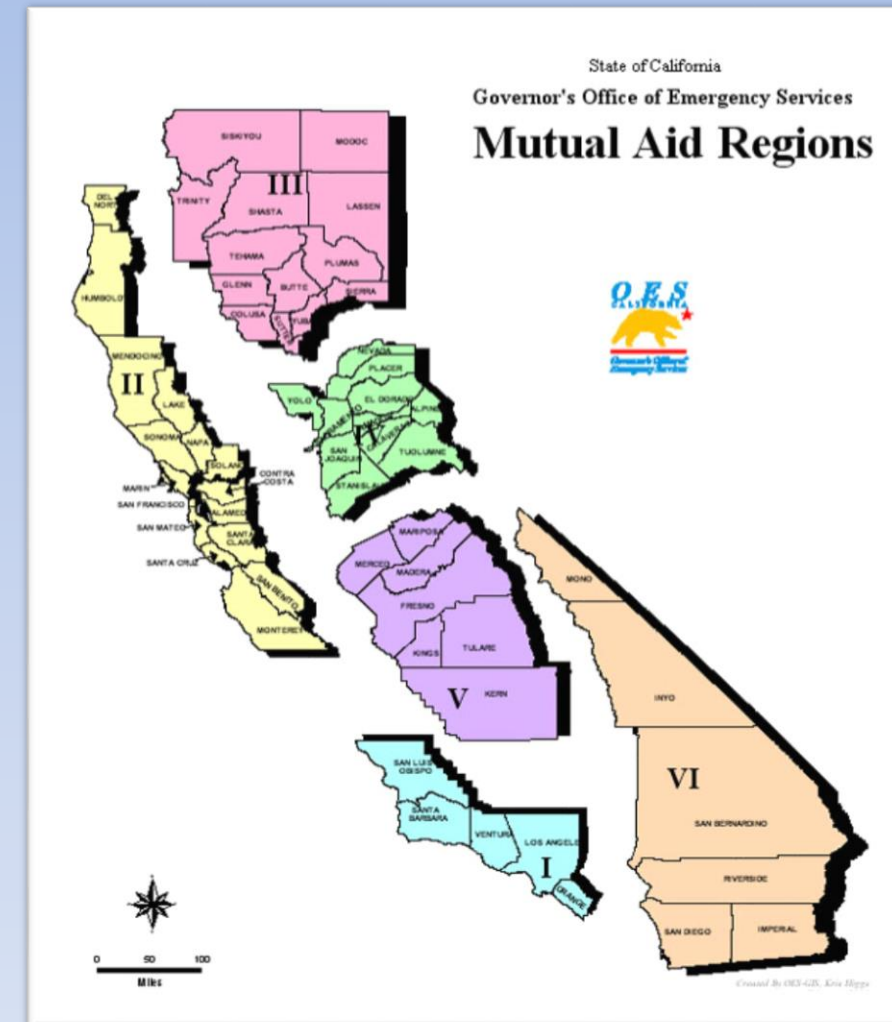
- Local Operational Control and Response
- Standardized Emergency Management System (SEMS) Compliant
- Structured to Facilitate Mutual Aid
- State Responsible for Resource Assistance
- Coordinate and Integrate Private and Public ESF 8 Partners

Standardized Emergency Management System (SEMS)

- During an emergency, multiple jurisdictions and agencies will likely be involved
- The purpose of SEMS is to:
 - Manage multiple agencies and jurisdictions in CA
 - Facilitate the flow of information within and between system levels
 - Coordinate amongst all responding agencies
 - Ensure structured and common response to emergencies
 - Incorporate the Incident Command System (ICS)

California

- 58 Counties
- 6 Mutual Aid Regions
- Home Rule State – ***Power of local city or county to establish own system of self-government***
- Gaps:
 - Every County is different
 - Disparate Systems (communications, patient tracking, resource requesting etc.)
 - Limited Cooperative Agreements between counties and across regions



EMS Mutual Aid/Assistance

- 15 Ambulance Strike Teams deployed over 100 ambulances used over the course of a week
- Teams from 13 California counties
- Medical/Health Personnel
EMT, Medic, RN, MD, RT,
mental health clinicians,
Enviro Health, CALMATs,
DHV, MRCs



Medical Impact

- **Total Fatalities** – 44 persons
- **Hundreds of injured** – Exact Number unknown
- **Shelters Opened combined** – 72 total
- **Facilities Evacuated** –
 - 2 Major Hospitals (Kaiser Santa Rosa 104 pts evac'd, Sutter Santa Rosa 83 pts evac'd)
 - 7 SNFs including Yountville Vets Home
 - Sonoma Developmental Center (SDC) 239 pts evac'd
- **Medical Needs Evacuees** –1,160



January 2018 Southern CA Mudslides

After weeks of wildfires, heavy rain caused flash flooding and mudslides in Santa Barbara and Ventura County

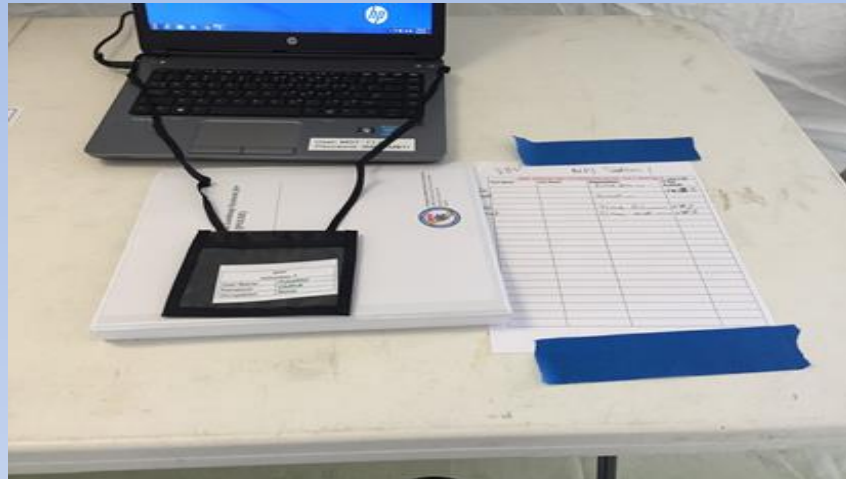


AP / Gary Phelps

June 2018 USAR/CAL-MAT Field Training Exercise (Moffett Field, CA)

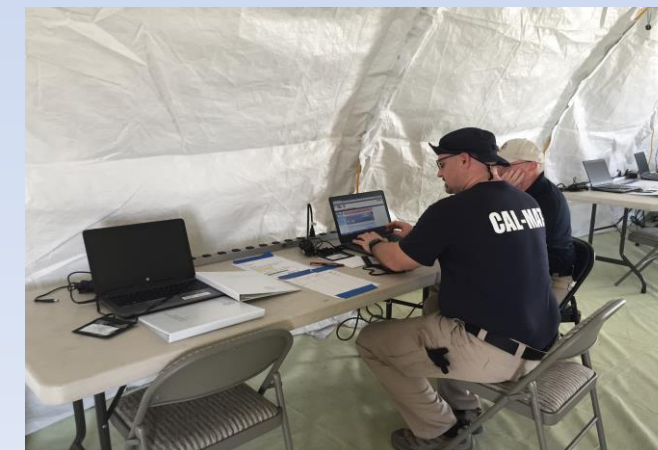


80 CAL-MAT/DHV Users Trained at PULSE Exercise



The exercise objective was to train CAL-MAT/DHV Providers on PULSE and to use the PULSE Asset while testing PULSE workflow in a disaster environment.

The Scenario used for the PULSE Exercise was a large scale earthquake in the Bay Area.





July 2018 PULSE was activated and deployed 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



Norovirus outbreak at evacuation center



My Top 5 Challenges

1. Statewide Coverage for PULSE
 2. Sustainable Funding
 3. Procurement Process
 4. Stable Internet Connections
 5. Improve Review Function
 - 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)
- Consolidate all requested documents into a single report with provenance to improve review time

The screenshot shows the PULSE web application interface. At the top, the PULSE logo is on the left, 'Contra Costa-01' is in the center, and 'Peter Fisher' with a 'Log Out' button is on the right. Below the header, there are 'Search' and 'Review' buttons. The main content area is titled 'Patient: John Smith'. Below this, there's a patient summary for 'John Smith' with buttons for 'Edit', 'Discharge', and 'Download'. The summary includes fields for Gender (M), Date of Birth (Jun 5, 1966), and SSN. Below the summary is a table of medical records.

Status	Title	Class Name	Confidentiality	Creation Date	Size	Location
+	Hospital Admission	ALLERGY NOTE	High	May 15, 2008	34.6 kB	St. Sebastian's Hospital
+	Hospital Admission	ALLERGY NOTE	High	May 15, 2008	34.6 kB	Santa Rosa Mental Health Institute
+	Physical Test	SUMMARIZATION OF EPISODE NOTE	Normal	May 16, 2008	34.6 kB	St. Sebastian's Hospital
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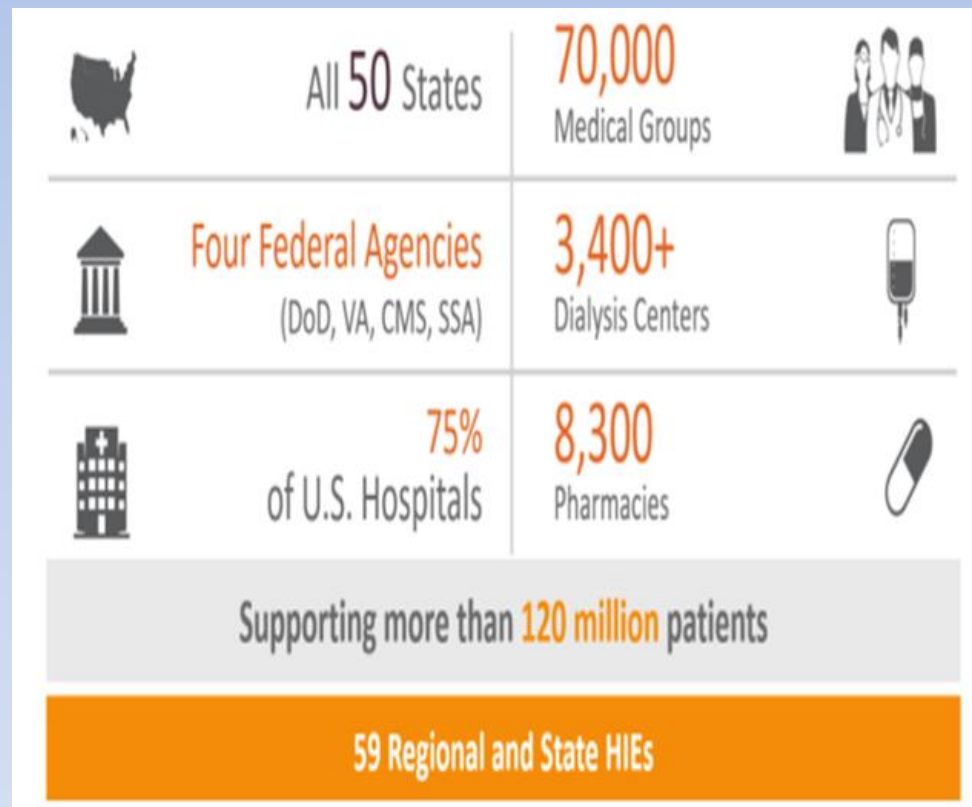
Next Steps

- 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.
- Continued collaboration with federal, state and local partners
 - ONC
 - NHTSA
 - NEMSIS
 - ASPR
 - CalOHII
 - CAHIE
 - Local EMS Agencies
 - Sequoia Project

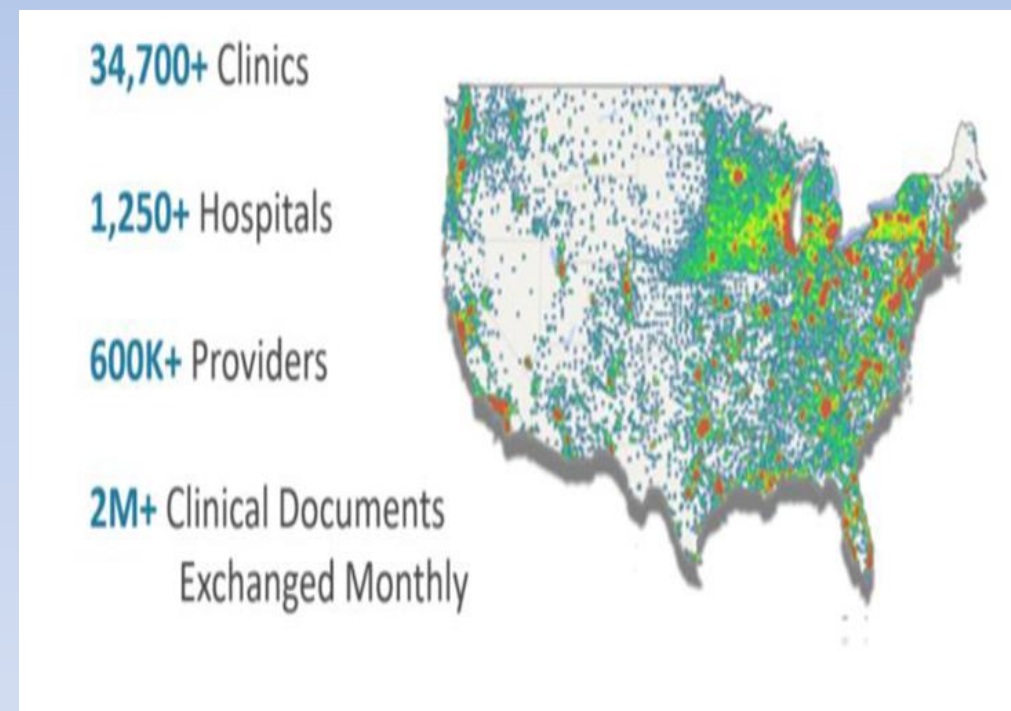


Next Steps Statewide Coverage

eHealth Exchange



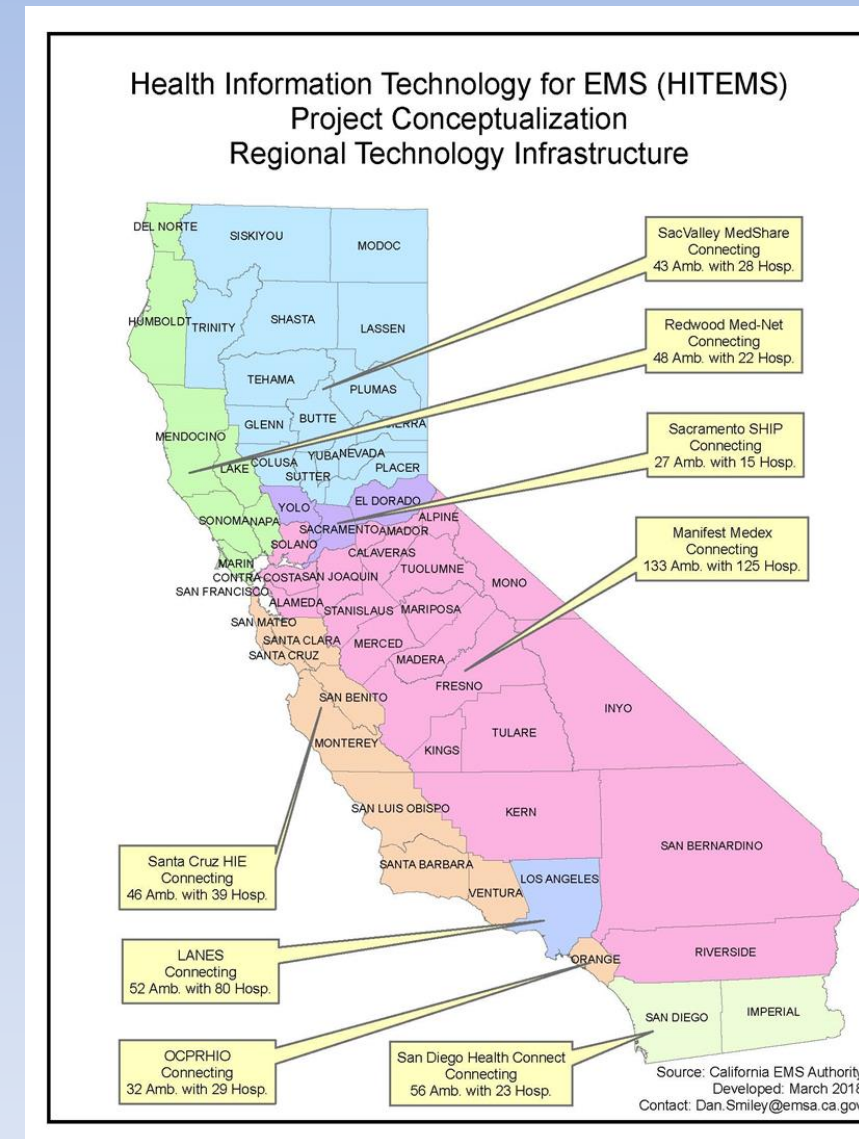
Carequality



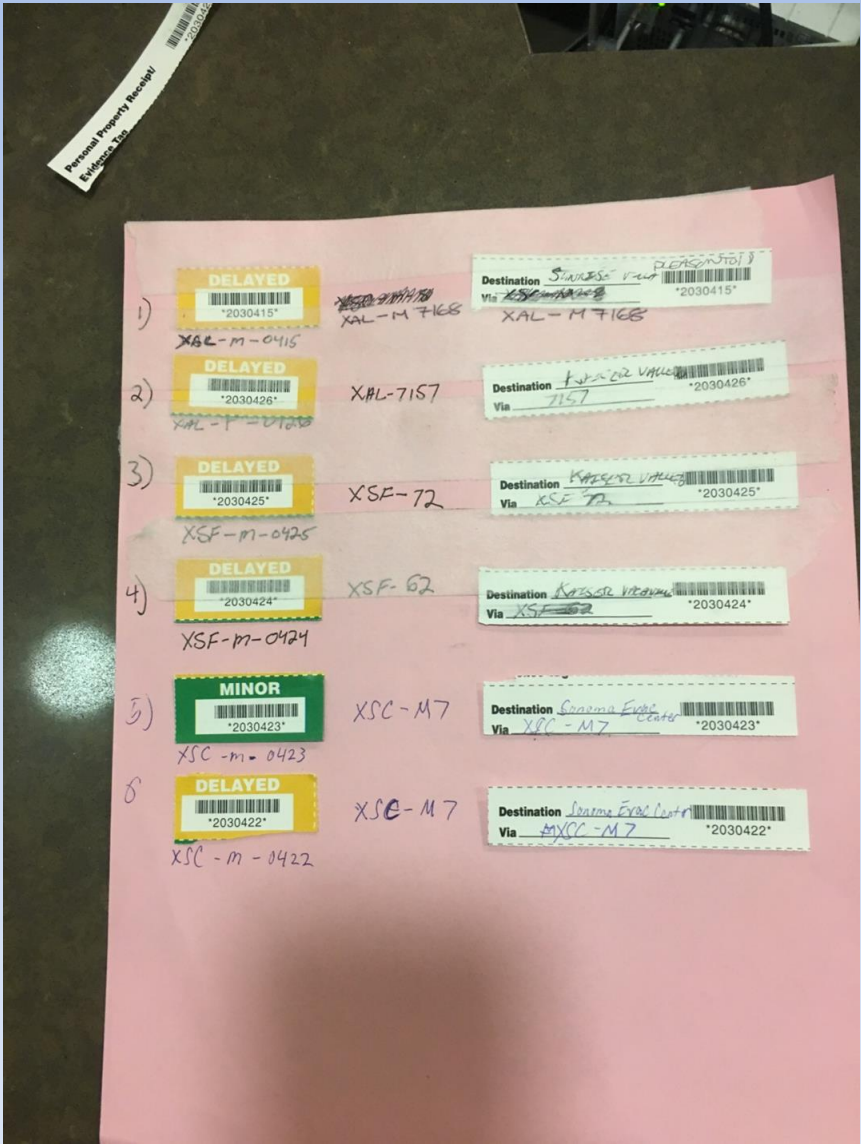
Onboard Additional HIOs

Current Connections

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



Patient Tracking



1)	DELAYED *2030415*	XAL-M-0415	Destination: <u>San Jose</u> Via: <u>XAL-M-7168</u>
2)	DELAYED *2030426*	XAL-7157	Destination: <u>San Jose</u> Via: <u>7157</u>
3)	DELAYED *2030425*	XSF-72	Destination: <u>San Jose</u> Via: <u>XSF-72</u>
4)	DELAYED *2030424*	XSF-62	Destination: <u>San Jose</u> Via: <u>XSF-62</u>
5)	MINOR *2030423*	XSC-M7	Destination: <u>San Jose</u> Via: <u>XSC-M7</u>
8	DELAYED *2030422*	XSC-M7	Destination: <u>San Jose</u> Via: <u>XSC-M7</u>

Building Support for PULSE in Texas

Nora Belcher
Executive Director
Texas eHealth Alliance

How PULSE Relates to Federal Strategies to Support Disaster Response Efforts

Kristen Finne

Program Manager, HHS emPOWER Program

Senior Program Analyst, Assistant Secretary for Preparedness and Response



Thank you for your participation.

SEQUOIAPROJECT.ORG