

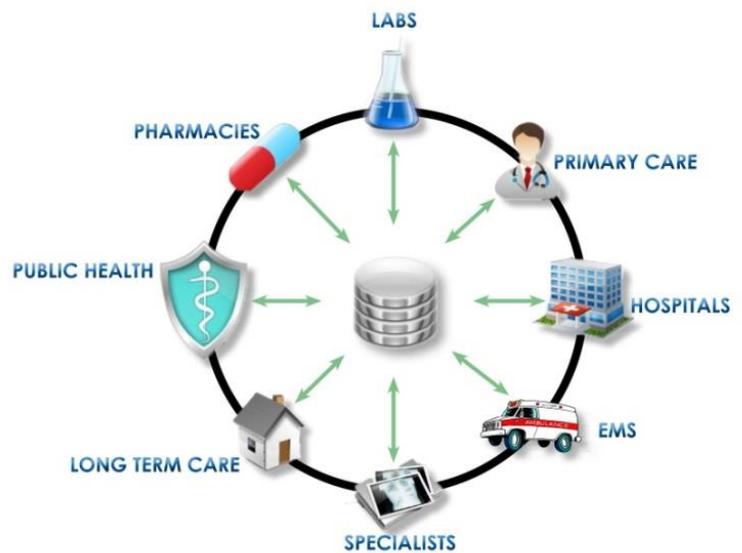
Health Information Exchange in EMS

Connecting EMS to the broader health care system through health information exchange is essential and it is inevitable. Access to information leads to better patient care, more efficient transitions of care, improved outcomes and experiences, and stronger disaster resilience.

Health Information Exchange (HIE) is the electronic movement of health-related information among organizations according to nationally recognized standards. The goal of HIE programs is to facilitate secure access to health care data by appropriate individuals to provide safe, efficient, effective, equitable, patient-centered care. HIE relies on a bi-directional flow of data and should cover all aspects of the patient care continuum including dispatch, field care, transport, emergency department, hospital admission, hospital discharge, and practitioner care.

There are many **challenges** to sharing health care data, including cost, proprietary systems, and a lack of collaboration that affect all provider types. The Office of the National Coordinator for Health Information Technology (ONC) within the U.S. Department of Health and Human Services is charged with addressing these challenges to move HIE forward nationwide by: providing a common language for data collection and transfer (standards), establishing guidelines for interaction between participants (policies), and supporting the creation of a path for merging patient records from various providers into one EHR for that patient and making that information both secure *and* accessible as needed (technology).

There are more than 40 health information exchange organizations operating in California, which are currently not **connected** to each other. Some are repository-style HIOs that collect the EHRs and members of the system can access them. Others leave the records with the entities that created them and use a “directory” to search each entity for information on a given patient as needed. Both ways work as long as the information: 1) is collected and stored consistent with national standards, 2) is secure and protected, and 3) covers all aspects of the patient care continuum.



Health information exchange makes it possible for any authorized health care provider to immediately access a patient’s health **history**. The paramedic at the scene can see the patient’s allergies, chronic conditions, recent treatment, medications, end-of-life decisions, etc., immediately, whether they have treated that patient before or not. This aspect of HIE reduces errors, improves the care provided and increases patient



satisfaction. Giving a health care provider ready access to information such as previous test results, imaging, treatments, etc. prevents unnecessary duplicate tests and improves diagnoses.

In addition to benefits at the patient and health care provider level, widespread adoption of health information exchange has macro benefits for the community. Linking the health records of many people allows analysts to aggregate data across an entire **population** for health-related research. Simple secure transmission of health data improves disease outbreak monitoring by simplifying public health reporting.

California Emergency Medical Services Authority Role in HIE and EMS Integration

In 2009 the federal government began providing funding, incentives and penalties to encourage hospitals and physicians to implement electronic health records and to promote development of the infrastructure to share those records among providers. EMS was not recognized in that process so, while 70 percent of EMS providers use an electronic patient care record, and several EMS systems are even sharing information locally in a limited way, EMS as a whole is far from the HIE goal of being able to securely send, receive, find and use relevant patient information among and between different healthcare entities.

EMSA's HIE in EMS project supports providers, hospitals, health information organizations, technology vendors, and local EMS agencies in creating the technical and administrative infrastructure necessary for secure two-way information exchange between EMS and other health care providers, facilities and payers.

Health information exchange should cover the full patient care continuum including dispatch, field care, transport, emergency department, hospital admission, hospital discharge, and practitioner care. Enabling paramedics to search records in the field would improve their ability to make urgent clinical decisions. System-wide, it would promote 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.

There are many challenges to sharing EMS data, including funding, proprietary systems, and a lack of collaboration between vendors, providers, hospitals and health information organizations. Even the data collection language EMS uses to report to the National EMS Information System is not directly compatible with the language used by the rest of the healthcare system for electronic health records (HL7). EMSA is working to overcome those challenges and support providers, health information organizations, vendors, and local EMS agencies in creating the infrastructure necessary for secure two-way exchange between EMS and other health care providers, facilities and payers.

