Emergency Medical Services & Health Information Exchange:

What do you need to know?

Health Information Exchange (HIE) refers to the secure and timely sharing of electronic health data across the boundaries of health care institutions.

An HIE organization is an entity that oversees or facilitates the exchange of health information among a diverse group of healthcare stakeholders within and across regions, according to nationally recognized standards. The exchange of health information has the potential to transform the way care is delivered by improving physician workflow, fostering increased communication among providers and patients, improving the ability to access and analyze data, and reducing healthcare costs.

Benefits of HIE

- Give Emergency Medical Services (EMS) providers the ability to use full Search, Alert, File, Reconcile (SAFR) functionality[1]:
  - **Search** individuals' health information for problems, medications, allergies, and end-of-life decisions to enhance clinical decision making in the field;
  - **Alert** the receiving hospital about an individual's status directly onto a dashboard in the emergency department to provide decision support and prepare for an individual's arrival—especially for treatment requiring time sensitive treatment or therapy such as trauma, heart attack, or stroke;
  - **File** the EMS patient care report structured data directly into the receiving facility and HIE Electronic Health Record (EHR) for a better longitudinal record;
  - **Reconcile** the EHR information including diagnoses, disposition and billing and payment back into the EMS patient care report for use in improving the EMS system, clinical quality measures, and population health, making EMS a full participant in the exchange of electronic health information. For EMS care teams, the verification of billing and payment information will serve as a critical return on investment.
- Efficient exchange of health information may improve the individual and care team experience by ensuring accurate communication of critical data from the first responders and ambulance transport to the in-hospital care team members, as well as assist in delivering the patient to the proper health facility.
- Integrated information systems allow for more efficient transitions of care between traditionally partitioned sections of the health care system, including prehospital, emergency room, inpatient, and outpatient care.

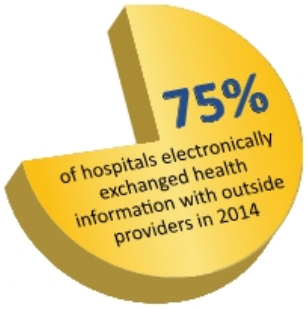
[1] Search, Alert, File, Reconcile (SAFR) Functionality for Emergency Medical Services was developed by the California Emergency Medical Services Authority (Daniel Smiley, June Iljana, Ryan Stanfield) under ONC Cooperative Agreement Grant #90IX0006/01-00 (2015)

- For example, Admissions, Discharge, Transfer (ADT) Alerts inform individuals' care teams of a change in status.

- HIE organizations ensure more effective care delivery, patient tracking, and resource coordination during major U.S. disasters and emergencies for patients who are displaced from their normal location or health care team.
- Incorporating EMS and acute care data increases the ability to analyze and trend on first responder impact on quality outcomes.

Why do we need HIE?

- Three-quarters of hospitals electronically exchanged health information with outside providers in 2014.[2]
- Physicians in the Emergency Department (ED) lack important or critical individual information 32% of the time.[3]
- Each year in the United States, approximately 114 million visits to EDs occur, and 16 million of these individuals arrive by ambulance.[4]



Current Landscape

EMS systems are universally regarded as an essential part of the health care delivery system.[5] A 2007 Institute of Medicine report stated, "EMS operates at the intersection of health care, public health, and public safety and therefore has overlapping roles and responsibilities. Often local EMS systems are not well integrated with any of these groups and therefore receive inadequate support from each of them."[6]

The ability to use an HIE organization as a resource for an individual's records is especially important to field paramedics and staff in an emergency room setting as individuals or their families may be unable to assist with basic, reliable health information. Not only is it critical that first responders have access to relevant health data, such as past medical problems, medications, allergies and end-of-life decisions, but the information they collect must be efficiently communicated to downstream providers.

[2] Madden, Jeanne M., Matthew D. Lakoma, Donna Rusinak, Christine Y. Lu, and Stephen B. Soumerai. "Journal of the American Medical Informatics Association." Missing Clinical and Behavioral Health Data in a Large Electronic Health Record (EHR) System. Journal of the American Medical Informatics Association, 14 Apr. 2016. Web.
[3] Garber, Larry, MD. Making an IMPACT on Care Transitions in Central Massachusetts. Reliant Medical Group, n.d. Web.
[4] Emergency Medical Services At the Crossroads." The National Academies Press. Institute of Medicine, 13 June 2006. Web.
[5] Kizer, Kenneth W., MPH, Karen Shore, PhD, and Aimee Moulin, MD. "Community Paramedicine: A Promising Model for Integrating Emergency and Primary Care." (n.d.): n. pag. UC Davis Institute for Population Health Improvement, July 2013. Web.
[6] Emergency Medical Services At the Crossroads." The National Academies Press. Institute of Medicine, 2007. Web.