

Health Information Exchange (HIE) Learning Series

HIE-106 EMS Exercise: DESIGN YOUR HIE SYSTEM FOR EMS

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Slide 1 of 31

November 17, 2014 – HIE Boot Camp

Course Overview/Purpose

- The *Design your own HIE System for EMS: Exercise* course addresses the development and sustainability of a model that provides a platform for EMS engagement and integration of HIE in both the community (Public HIE) and private setting (Enterprise HIE). The course addresses the unique considerations related to *Multi-Agency Coordination and Interoperability* from a variety of stakeholder perspectives as well as structural considerations associated with creation of an HIE model for Emergency Medical Services systems.

Slide 2 of 31

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Learning Objectives

At the conclusion of this HIE-105 EMS Exercise course, participants will be able to:

1. Identify the purpose and value of stakeholder engagement in the integration of public and private HIE to transfer patient information from EMS to hospitals;
2. Develop strategies for implementation of HIE related to EMS;
3. And, prioritize activities to improve emergency care and disaster planning.

Slide 3 of 31

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HIE Planning Scenario

- You are assigned to plan for the development of an Health Information Exchange program for your EMS service area.
- Using your planning group at your table, discuss the following scenario and answer some questions regarding key design elements.

Slide 4 of 31

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2 Local EMS Agencies

- 1 Urban
- 1 Mix of some Urban and some Rural

Slide 5 of 31

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HIE Planning Scenario

- 2 Local EMS Agencies (2 Counties) work closely together and have natural patient flow patterns that make these interdependent
- 1 million Population
 - 8 Hospitals
 - 5 Ambulance Providers
 - 6 Fire Department First Responders (Non-transport)
 - 1 CHIO
 - 4 Private HIEs

Slide 6 of 31

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8 Hospitals

- University Hospital, uses **EPIC** for their EHR, and runs their own Private HIE
- Kaiser Hospital, has 2 Hospitals in the area, uses **EPIC** for their EHR, (but it is a different EPIC build). They run their own Private HIE.
- St. Elsewhere Hospital and Health System, has 2 Hospitals, and uses **Cerner** EHR. They run their own Private HIE.
- Acme Health System has 2 hospitals, and uses **EPIC** for their EHR. They run their own Private HIE.
- Independence Hospital has 1 hospital and uses **McKesson** for their EHR. They have connected with the CHIO for HIE capability.

Slide 7 of 31

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Hospitals

- Each LEMSA and hospital uses **Reddi-Net** as their Emergency Communications Provider.
- What can be the potential role in health information exchange, disaster medical response, or patient tracking?

Slide 8 of 31

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5 Ambulance Providers

- 2 Fire Department Ambulance Providers uses **ImageTrend** as their ePCR software vendor (running NEMSIS 2.2.1). Uses tablets for entry at the patient. They also have **Physio-Control** monitor/defibrillators with a capability to use the LIFENET/CODE-STAT 9.0 System.
- 1 Private Ambulance Provider uses a homegrown electronic system on NEMSIS 2.2.1. No "gurney-side" entry.
- 1 Private Ambulance Provider uses **Zoll** for their ePCR.
- 1 Private Ambulance provider uses **Beyond Lucid Technologies** to collect its ePCR data in a NEMSIS 3x format.

Slide 9 of 31

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6 Fire Department First Responders (Non-transport)

- 2 Fire Department First Responder Agencies that provide ambulance services also with ePCR capability
- 4 Fire Department First Responder Agencies that provide first response services and are on paper PCR's.
 - 2 are ALS Providers
 - 2 are BLS providers

Slide 10 of 31

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HIEs

- 1 Public Community HIO, that operates using a Federated Model (**Mirth**)
- 4 Private HIEs
- A Private Provider that uses a Cloud-based Solution

Slide 11 of 31

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Stakeholder Engagement?

- What Stakeholders do you need to bring together to design a system?
- LEMSA
- EMS Providers
- Hospitals
- Public and Private HIEs
- Medical Society

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Roles?

- What is the possible roles of the LEMSA in designing and operating the system?
- What is the role of the California Trust Network?
- CAHIE?
- Hospital Association or Hospital Council?

Slide 13 of 31

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Benefits of Connectivity?

- Meaningful Use
- Syndromic Surveillance
- Core Clinical Measures
- POLST, DNR, Advance Directives

Slide 14 of 31

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What Information Do You Want to Exchange?

- Send to Hospital
- Receive from the Hospital

Slide 15 of 31

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System Design?

- What linkages between EMS providers and hospitals would you use?
- Create a simple Diagram
- **Covisint** has contacted you to use a Cloud platform to connect your EMS services to the hospital.

Slide 16 of 31

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Connectivity to the Health Information Exchanges?

- Who connects to whom?
- Will you use Direct Messaging or Exchange (Query) methodologies to obtain information?
- **San Diego HealthConnect** has offered to assist your jurisdiction set up a system if you have a Federated Model. Thoughts?

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Technical Aspects?

- What System upgrades do you need to consider to prepare this system for HIE?
 - Hardware
 - Software
- What is your Priority Order of Implementation?

Slide 18 of 31

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Technical Aspects?

- Who needs to be on a ePCR now?
- Does NEMSIS 3x currently have CDA, CCDA and CCD documentation that has been approved by HL7?
- What critical information must EMS personnel collect and enter in the ePCR in order to connect with a Master Patient Index (MPI)?

Slide 19 of 31

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Legal and Privacy?

- What HIPAA Privacy and Security Rules and California Confidentiality of Medical Information Act (CMIA) issues must be addressed?
- What Agreements (ie Business Associate) are required and between whom?
- Who needs to participate in a DURSA?

Slide 20 of 31

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What Barriers Do You Need to Overcome?

- Initial Funding for Infrastructure?
- Sustainability? How would you pay for the system to be self-sustaining?
- Would the providers be willing to pay \$1 a record? \$2 a record?
- Privacy and Security?

Slide 21 of 31

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Disaster Planning?

- The 2 adjacent LEMSAs wish to connect their operational HIEs to yours for disaster response. One is running a **Mirth** platform and another an **Orion** platform.
- Can ADT messages be used to help with patient tracking?

Slide 22 of 31

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Disaster and Emergency Planning for Individuals?

- There is a large disaster planning group that is pushing individuals to have BlueButton technology (**Humetrix**).

Slide 23 of 31

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What other Considerations are Required in Designing Your System?

Slide 24 of 31

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Questions???

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