Health information exchange (HIE)

Definition: The mobilization of health information electronically across organizations *within a region or community*. HIE provides the capability to electronically *move clinical information between disparate health care information systems* while maintaining the meaning of the information being exchanged. The goal of HIE is to facilitate access to and retrieval of clinical data to provide safer, more timely, efficient, effective, equitable and patient-centered care.

Electronic Medical Records (EMRs) from different facilities may not be able to share data without a work and planning from both the technical side and the operational side. Some issues are listed below.

Technical considerations

- The EMRs must have some minimal predefined functionality and have the capability to send and receive data using established standards
- If there is no unique person identifier, it may be difficult to identify a patient across different organizations' EMRs
- Unless the data (i.e. drugs, tests, allergies, etc.) is standardized, much of the information contained in one facility's EMR would be meaningless to another facility's EMR even if both facilities have a system from the same vendor

Other considerations

- A structure or organization will be required to:
    - Administer access to the records
    - Follow up if an unauthorized access complaint is received
    - Oversee day to day activities
- Procedures may need to be defined to support the patient's ability to opt in or opt out (from participation in the HIE) or restrict access to parts of their medical record
- There may be substantial startup costs

Prepared by Alan Okerson, Director of Information Technology, Trinity Health, Minot ND on behalf of the North Dakota Health Information Technology Committee

Electronic Medical Records (EMR)

Definition(s): A computer-accessible resource of medical and administrative information available on an individual collected from and accessible by providers involved in the individual's care *within a single care setting*.

National Alliance for Health Information Technology

An application environment composed of the clinical data repository, clinical decision support, controlled medical vocabulary, order entry, computerized provider order entry, pharmacy, and clinical documentation applications. This environment supports the patient's electronic medical record across inpatient and outpatient environments, and is used by healthcare practitioners to document, monitor, and manage health care delivery within a care delivery organization (CDO). The data in the EMR is the legal record of what happened to the patient during their encounter at the CDO and is owned by the CDO.

HIMSS Analytics Database

Features of an EMR

- The patient's information is in one place
- Based on role and need, access to information is secured
- Information available to multiple care givers at one time wherever they may be
- Information may be entered in real time so the record is kept up to date
- Availability of patient history
    - Previous visits
    - Drugs
    - Allergies
    - Test results
    - Radiology images
    - Etc.
- Treatment guidelines can be provided to assist providers
- Orders entered electronically and appropriate care givers notified
- Drug to drug and drug to allergy interaction alerts
- Immediate notification of appropriate staff of orders placed
- Test results immediately available
- Because all information is available from multiple visits to multiple providers, duplicate tests are reduced or eliminated
- May contain discrete data that can be used for trending and reporting

Not all EMR systems are created equal and may have only some of the above capabilities.