From the HIE Point of View: When is Data Too Old to Use? It Depends

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When health information management involved keeping paper records in file rooms, a rule of thumb was that after two years with infrequent activity, medical records were often moved to off-site storage. This reduced the cost of maintaining medical records onsite long term. The records often included information received from other organizations that was utilized in clinical decision making. How relevant was all the information we received and maintained? Many times we were unable to answer that question.

We have an opportunity in the electronic world to provide more relevance to the exchange of clinical data and to ask ourselves:

> "What information should be pulled from other healthcare organizations?"
> "When does 'old' become 'too old'?"

Exploration is required from a clinical, legal, population health, and cost standpoint. What is the long term cost of storing information? What is the clinical value?

In talking to clinicians the answer, often, is that "it depends." For instance, chromosomes or other genetic tests from birth forward will always be relevant. However, general laboratory values from several days ago may already be meaningless from a clinical standpoint. In the case of a diabetic, it might be important to trend glucose levels over time and multiple locations. The same applies to chest X-rays for chronic obstructive pulmonary disease or congestive heart failure patients—long-term trending is clinically helpful. At the point of care, most data over 12 months old is of limited value because it has been superseded, is out of date, or already exists in the electronic health record (EHR) system. Historic data of any age that is more static—for example, a complex procedure for a congenital anomaly or an EKG—can be of high value long-term. The potential exists for each clinical discipline to provide standards on when data generated is too old. What is important to a cardiologist may not be important to an endocrinologist.

Population management outcomes data monitored over long periods of time, such as in the Precision Medicine Initiative, may or may not have an expiration date. Sorting through the overabundance of information will require standards development organizations and the stakeholder community to understand the value of data under different circumstances. The use of HIE and the clinical parties involved will dictate when information is "too old."

An interesting viewpoint is that health information exchanges (HIEs) are not bound by the same retention rules as those that govern healthcare entities. HIEs are not considered owners of the data, but as middle men in the sharing of information—bridging the gap for the clinical continuum. Contractual obligations seem to determine the length of data retention, and the length of time varies among different HIEs.

The cost of electronic storage is dependent on the need for immediate access or delayed access and can vary based on security requirements. Costs for retaining electronic data are currently considered low. However, as data accumulates and security requirements increase, the cost may rise. Information governance processes that define management of this asset from acquisition to archiving and later destruction lay a foundation for electronic storage of data.

HIE technical systems should respond to standards providing a mechanism dependent on the need for date ranges based on purpose or type of information. For example, for treatment the system may be configured to send vital signs up to 30 days old, all current medications, allergies, problem list, immunizations, laboratory values for 9 months, and radiology reports for 1 year, with the ability to pull additional information as identified. This would provide the opportunity to pull the unique information cited above surrounding genetic testing, chronic co-morbid conditions, and congenital anomalies.

After discussion with several clinical care providers and review of health information exchange practices, a general guideline for information consumption was developed. However, it was recognized that the need may be different by discipline, with flexibility required.

	Allergies, Immunizations, Problem List, Current Medications, Past Medical History & Genetic Markers	Clinical Documentation, Images, Cardiology & Radiology Reports	Visit Level Information & Diagnoses	Laboratory	Vital Signs	Pathology
Always	X					
3 months					X	
9 months				X		
1 year		X	X			
5 years						X

When all is considered, data management is about relativity, clinical need, legal requirements, innovative technology, standards, and the cost of data storage. While storage costs are low, they are beginning to add up. Unless organizations consider the cost of electronic storage now, they will be faced with the same dilemma as in the paper world where the cost increased exponentially year after year.

This is uncharted territory, we must engage as HIM professionals using the tools available within information governance to provide structure and long term clinical and financial viability. The significance of an HIE is dependent on the value of the exchange of the clinical information from multiple platforms.

When is the data too old for an HIE? It depends.

More information regarding the Precision Medicine Initiative is available at: https://www.whitehouse.gov/precision-medicine and https://www.nih.gov/precision-medicine-initiative-cohort-program.

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