The challenges and opportunities with interoperability

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In healthcare, it is difficult to think of a buzzword that is bigger than interoperability. Of course, just because it is a buzzword does not mean that it is a fleeting trend. *Interoperability impacts healthcare delivery for both the patient and the provider.*

The current landscape

To understand its significance, it is important to understand the current landscape. Today, providers are faced with a staggering list of challenges: Data sharing restrictions, a lack of standardized data formats in disparate systems, legacy systems storing important data, costly interface fees, PAMA lab fee cuts, reduced reimbursements, and time and resource constraints. Combine these items with the need to move toward value-based care, and the need to solve these challenges becomes increasingly necessary.

For example, laboratories and health systems are making substantial monetary and operational investments in interface engines and development resources so their EHR system can communicate with laboratories. Health systems have particularly complex requirements, which further delay their interface implementations and increases expenses by hiring costly personnel to complete the projects. Each time, they form a team to develop these interfaces and perform these implementations, spending a tremendous amount of time and resources "reinventing the wheel," even though these interfaces have already been developed by someone else somewhere else. Unfortunately, as this issue often goes unrecognized, hospitals continue to allocate budgetary and personnel resources when they are already strapped.

EHRs have done a very good job in capturing and storing data. Their limitation, however, is exposed in the application of clinical workflows. A patient can go to the hospital and receive treatment, then, in subsequent years, may receive care from their primary care providers or specialists as needed for various treatments or procedures. Suppose that patient goes back to the hospital a few years later. If the specialists or primary care physicians had used different EHRs to document the patient's care, the hospital will have no insight or visibility into other treatments and visits that the patient experienced. With interoperability between their systems, not only would the patient have an improved care experience, with clinical decisions based on a holistic view of their medical history, but the providers would reduce testing and costs. Additionally, for Medicare Advantage patients, the health systems and ambulatory practices will now have a singular way to calculate the correct Risk Adjusted Factors scores for their value-based reimbursements.

Reducing costs

The need to reduce costs wherever possible is paramount to future profitability and success for both health systems and ambulatory practices. One significant opportunity to reduce costs is through the right interface strategy. Modern healthcare interface engines that act as a central hub of all clinical transactions are available today for enterprise-wide interoperability. Such engines allow hospitals, labs, radiology centers, and clinics to stop reinventing the same wheel and start reusing already-developed interfaces. Instead of building and implementing interfaces, they focus on easy configuration from drop-down lists, allowing for super-fast deployments—sometimes within minutes. Additionally, they significantly reduce the costs of hiring interface developers with high salaries and expensive interface engine fees.

Another way health systems can achieve more interoperable workflows is to utilize a referral system. Referral systems streamline the flow of patient referrals between healthcare providers, enabling close relationships between all providers while streamlining and coordinating the patient's care. Such referral systems integrate with both acute and ambulatory EHRs, facilitating interoperability for sharing clinical data.

The HL7 organization developed Fast Health Interoperability Resources standard (FHIR) as a resource to enable interoperability between systems. It is designed to allow patient data to be vendor-neutral, formatted as discrete data points, and retrieved as real-time actionable data. Currently, specific FHIR implementations may differ between vendors, requiring individual development and ongoing version updates. However, there is recognizable commitment from vendors who comply. Ongoing adoption and implementations that support FHIR will result in significant movement toward interoperable data.

Further advancements

Enterprise-wide master patient index (EMPI) systems designed to maintain consistent, accurate, and current patient medical data and demographic data across various departments will impact workflows, reduce costs, and move toward patient-centric care. Patient matching capabilities and EMPI systems will also lead to a significant change in the clinical workflow and the patient experience. The result of these advances is a complete picture of patient health, helping providers identify gaps in patient care. This visibility also provides insight into patients with chronic care needs, reduces readmissions, and assists in accurately calculating risk adjustment scores for Medicare advantage.

As interoperability advances change the provider's workflow, the patient will also experience a higher level of involvement in their own care. Mobile health portal applications on iPhone and android devices will be driven by involvement with the patient, allowing them data access directly from their phones.

These technological opportunities and steps to foster interoperability will be significant considerations to sustain profitability while maintaining focus on the patient. Interoperability, based on true connectivity between systems that provide actionable data, will result in providers offering patient-centric care in a value-based healthcare world. **HMT**

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