Top 5 Benefits of Semantic Interoperability

True interoperability enables fast, easy data sharing and balanced workflows

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In today's health practices, the ability to share information across the practice, or across different specialties and practices, is critical to good patient care and the success of both the practice and its staff. While Electronic Medical Records (EMR) mandated by the Affordable Care Act (ACA) are a first step in collating patient information, competing EMR companies simply do not talk to one another. That means doctors and hospitals are struggling to share the information needed to provide quality, timely, and cost-effective patient care. It turns out that data sharing in healthcare is much more difficult in execution than in concept. The problem is, most practices are built on a heterogeneous mix of systems that may or may not be able to interface with one another, and certainly can't interface with systems outside the practice.

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While some EMR systems are built to be interoperable, these systems were designed primarily for billing, not for helping clinicians provide better patient care, and most are only interoperable with systems from the same vendor. The lack of information flow results in problems including inappropriate procedures; slower diagnosis and treatment; overlooking contributing factors; and data locked in obsolete systems that can't be migrated due to their size or format.

Though some EMRs take a broad view of the concept of "interoperability," true interoperability as it relates to real problems and workflows in a healthcare practice has a very specific definition. True semantic interoperability allows you to not only interface with other systems, regardless of vendor, it allows you to choose and sort the information you need. This type of interoperability can interact with other systems via the Internet or local network and provides meaningful clinical information to the clinician or physician in the context of what they are searching for, and in a single view. For example, true interoperability would allow a physician to see a full view of an EEG instead of just a 10 second snapshot representation.

Given that most systems today were built to bill for procedures, most of the databases for EMRs and Clinical Data Repositories (CDR) are built around getting paid, not around creating reports or creating context of what data actually means. Generic interoperability functionality may interface with other systems from the same vendor, but many can't interface with systems from other vendors, and most just perform a data dump with no way to sort the information.

Top 5 Benefits of Semantic Interoperability

1. Meaningful Analytics

True semantic interoperability allows you to get analytics about physicians' or clinicians' processes. This allows the practice to streamline work balance and work sharing, helps administrators ensure they have the right staff scheduled, and helps identify excesses in order to free up clinicians for other key work and increased productivity. This type of interoperability also allows administrators to track how long it takes to complete a case and identify the most efficient teams for the job for increased throughput. Meaningful analytics also helps mobilize targeted marketing by identifying extra capacity in the practice, and improves quality by producing comparing reports and results by referring physicians. For example, if a referring physician consistently sends normal patients to a specialist, analytics provides the opportunity to coach them on differential diagnosis or less expensive, less invasive, less time consuming solutions to patients' problems. This improves meaningful use of resources and overall physician quality.

Meaningful analytics also helps the practice define clinical processes and disciplines that guide effective, consistent behaviors. Analytics can immediately identify inconsistent behaviors and provides a method of handling excursions and exceptions in behaviors.

2. Enables Re-engineering of Clinical Processes

Semantic interoperability allows the practice to re-engineer clinical processes and helps make processes more effective. When systems are truly interoperable, administrators can identify excursions so they can account for when and how a clinician or physician behaves outside of protocol.

3. Maximizes Resource Utilization

Analytics provided by semantic interoperability also maximizes resource utilization by allowing the practice to identify open rooms, underutilized staff and unused equipment. This information helps administrators make the most of the practice's resources for optimized patient care and throughput.

4. Monitors Clinical Quality

Semantic interoperability enables better patient care and addresses patient and provider safety issues. Analytics provided by semantic interoperability helps administrators identify and stop problems before they become problems.

5. Solves the problem of system obsolescence

Instead of attempting to migrate huge volumes of data, semantic interoperability allows IT to put legacy systems into a maintenance mode and pull data from it when necessary. This eliminates the need to "rip and replace" aging IT systems and contributes to cost savings and cost containments.

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MEDxConnect for True Semantic Interoperability

Compressus' MEDxConnect is the first patented vendor neutral software designed to connect competing EMRS, PACS, HIS, Archives and Analytics. MEDxConnect serves as an information hub that facilitates the easy exchange of patient information between data acquisition, medical imaging and clinical systems. Using a vendor-neutral, highly scalable architecture, healthcare providers in virtually any department or subspecialty can easily access all of the patient information they need to make accurate diagnoses—including medical records, images, lab results, medications and more—from anywhere in the enterprise, using a single worklist. In addition to sharing information across the healthcare enterprise, MEDxConnect uses patented algorithms to assign and distribute personalized clinician work lists to balance work assignments throughout the footprint. MEDxConnect can make use of subspecialists to service offsite locations. Rule-based and easy-to-use patented search functions can quickly and intuitively generate medical history for past illnesses, relieving the physician of having to search through copious charting. The resulting speed and simplicity of this proprietary technology has already shown considerable increase in physician productivity.

Conclusion

Many EMR systems claim they are interoperable, but they are not truly agnostic. When a health practice has systems that can't communicate or from which they can't extract meaningful analytics, the practice suffers from inefficiencies and decreased ability to provide quality patient care. True semantic interoperability enables health practice IT systems to share data, regardless of vendor or age or type of system. This type of interoperability provides timely, meaningful data that allows physicians and clinicians to provide better patient care and reach their own efficiency goals, all while helping the practice maximize resources.

COMPRESSUS
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About Compressus, Inc.

Established in 2000, Compressus, Inc. (**www.compressus.com**) is a medical software company offering a proven interoperability and workflow platform to the rapidly growing healthcare IT market. Its MEDxConnect software is the first solution that indexes, integrates and routes all relevant patient medical information to the healthcare professional in real time, thus dramatically improving physician efficiency, reducing enterprise costs and increasing patient safety. The solution's workflow flexibility enables users to rapidly accommodate new environments, markets and regulations. The MEDxConnect products address the problems associated with integrating healthcare enterprises plagued by the challenges of workflow, and a lack of connectivity and interoperability between disparate islands of data in all specialties of medicine. The MEDxConnect System is a suite of offerings designed to manage the medical imaging workflow of a healthcare enterprise. It has the power to connect disparate systems and provide automated interoperability to the enterprise and allows an organization with disparate multi-vendor systems to function as one virtual enterprise.