Building Blocks for Meeting the HIE Interoperability Challenge of ACOs

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As the healthcare industry business model shifts from a volume-based to a value-based model, accountable care organizations (ACOs) are a critical piece of healthcare's new structure. The number of ACOs has almost tripled since 2011—increasing from 146 to 488 in two years.[1] Financial and patient care success for these ACOs is dependent on the ability to share patient data across the entire range of providers included in the ACO. Because ACOs are comprised of a mix of physicians, hospitals, outpatient clinics, diagnostic services, and other ancillary providers, the number and type of disparate systems that must communicate with each other can easily overwhelm an information technology staff.

Not only are staff resources pushed to the limit but the financial investment required is significant. In fact, according to a Black Book Rankings survey, the ACO data requirements costs vary from $1 million to $4 million before launching operations.[2]

Health information can be exchanged in one of two ways: point-to-point or hub and spoke. In a hub and spoke model, an application or service provider is in the middle brokering the information exchange between all applications. A point-to-point integration, on the other hand, is a dedicated connectivity that is established between two systems so that they are communicating with each other independent of other systems. Both models connect ACO members, but point-to-point connections require higher levels of financial and staff investment.

A cloud-based hub and spoke data exchange model enables the integration, aggregation, and harmonization of data to take place in a central space that is more easily adopted by disparate sources. Addressing standards, upgrades, and expansions in the hub can be effectively managed without disrupting individual providers' connectivity.

Simply connecting all ACO participants is not enough. To be successful, the organization has to apply the right analytics to all data to generate required reports, identify population health best practices, and enable communication between participants. The most natural first step is to look at the entire organization from the top down, focusing on the elaborate analytical applications rather than evaluating interoperability needs.

However this is not the best way to manage the complexity of an ACO's data exchange needs. A best practice is to view and address ACO interoperability as a series of building blocks—starting with a solid foundation, then building up to the level where analytics can be applied to provide information upon which decisions can be made.

Building Block #1: Practice-Level Information Forms Foundation

Any successful ACO begins collecting data at the foundation, or practice level, of the organization since most of the care is delivered in practices. The patient-provider relationship starts with an individual health record that includes clinical notes on examinations, lab results, and imaging reports that provide valuable information for the immediate and downstream provider.

The challenges of collecting practice-level information are significant since some physician practices either have no electronic health record (EHR) system or the group of physicians have a wide range of EHRs with varying capabilities for integration with outside systems. As of April 2013, 75 percent of "meaningful use" EHR Incentive Program eligible hospitals had implemented an EHR system, while only 55 percent of eligible healthcare professionals had made a financial commitment to an EHR system.[3] In addition, there are more than 500 different certified ambulatory EHRs and more than 140 certified inpatient EHRs in use.[4] If, however, practices can keep their current EHRs while integrating, aggregating, and harmonizing data on an ACO platform that allows all users to access and transmit data easily, then the financial burden on individual practices as well as the ACO is minimized. When building the foundation for health information exchange in an ACO, the most

logical starting point is the capture of lab and radiology orders and results, which are generally standardized, at the practice level. With this information comprising about 70 percent of the individual patient record, the ACO is already off to a good start.

Building Block #2: Longitudinal Record Enables Collaborative Care

As information from individual practices is gathered, a longitudinal record that collates a patient's information from disparate sources into one record is essential. A longitudinal record that includes patients' medical histories—including problem lists, lab or imaging results, diagnoses, and treatments—presents the complete picture providers need to make clinical decisions.

This is the point at which cost-effective, collaborative care takes place. When a patient's history follows them from provider to provider, each physician can see what previous tests have been ruled out so the diagnostic process can move forward without subjecting patients to time-consuming, expensive, and repetitive tests. But HIM professionals should not just include clinical information in the longitudinal record. Financial information such as claims reports and payment histories set the stage for the next ACO health information exchange level, which relies on a robust central data repository.

Building Block #3: Analytics Applied at Highest Level for ACO Reporting

Macro-level analysis of financial and clinical information collected at the first two building block levels provides the reporting metrics and population health data that an ACO requires for sustainable success. The ability to combine a variety of data—structured and unstructured as well as clinical and financial—enables a comparison of patient outcomes to financial results.

When this data is collected in a central repository rather than individual silos, the ACO has access to a greater breadth of business knowledge to guide decisions. This data also provides the information necessary to report on the 33 quality measures required by the Centers for Medicare and Medicaid Services to participate as a Medicare Shared Savings ACO.

Choose Building Materials Carefully

There are many technologies designed to support the exchange of information, but the goal is not to use the newest or the greatest number of technologies. Rather, the goal is to use those tools that will interact with each other most effectively to create the best structure for data exchange.

As the three levels of the ACO are built to provide effective exchange of health information, it is critical to recognize the role each plays in the support of the next level. Easily managed data not only improves the sustainability of the ACO but also opens doors to other opportunities, such as life sciences company research and clinical trials, that further enhance the healthcare organization's ability to improve their quality of patient care.

Notes

1. Leavitt Partners. "Growth and Dispersion of Accountable Care Organizations." August 2013. http://leavittpartners.com/aco-consulting/.
2. Black Book. "Start-up ACO's Anticipate $500m First Year Spend For Essential Health Technologies, says Black Book Market Research Survey." September 24, 2012. http://www.prweb.com/releases/prweb2012/9/prweb9908320.htm.
3. Manos, Diana. "$14.6 billion in MU incentives paid." *Healthcare IT News*. June 6, 2013. http://www.healthcareitnews.com/news/146-billion-mu-incentives-paid-out.
4. Charles, Dustin and Steven Posnack. "EHR Certification: By the Numbers." *Health IT Buzz*. September 12, 2013. http://www.healthit.gov/buzz-blog/ehr-case-studies/ehr-certification-numbers/.

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