

An Innovative Approach to Health Data Integration: The athenaNet-Microsoft Amalga Connector

June 14, 2011

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Digitized Health Data and Dispersed Providers Drive the Need for Data Integration Platforms

Since the passage of the HITECH Act in 2009, we have undoubtedly made steady progress towards the digitization of health data and the adoption of health information technology tools like EHRs. While we still have a considerable way to go before we reach full adoption of EHRs and the meaningful use of the data they contain, we can be encouraged by the pace of the uptake of health IT across a variety of inpatient and outpatient settings. The strong growth of health IT witnessed over the past couple of years is expected to continue in spite of conflicting studies regarding the overall impact of tools like EHRs and computerized provider order entry (CPOE). Simply put - the drivers outweigh the restraints in this market and it's all about our increasingly urgent need to reign in costs. Health IT adoption may not happen as fast as we like and it absolutely won't be painless or without controversy, but it is happening and there's no going back.

Obviously, the reason we are focusing such extensive efforts and resources on the increased use of health IT tools is because we fundamentally believe that improved access to information, particularly at the point of care, leads to improved safety, quality, and efficiency. Another key issue is significant structural changes in the health care system, particularly with regard to provider consolidation and the need to coordinate the process of care over a dispersed network of participants including hospitals, physicians, specialty clinics, nursing homes, and so on. With the help of \$30 billion in federal stimulus funds, providers across various settings are moving forward on implementing EHR systems in order to capture and store a plethora of digital data related to patient care. What they need to do now is take the digitized data within an EHR and other IT systems and use it effectively - or meaningfully - and that means moving beyond data capture and storage to data exchange and integration. This is where we begin to reap the promised benefits of health IT; otherwise, electronic data stored in inaccessible silos results in clinicians and administrators wasting time and effort in trying to gather, verify, and consolidate data in order to get a complete and whole view of the patient. Effective health information exchange remains the biggest hurdle to conquer and there is increasing concern about the need to solve this problem as soon as possible, particularly given the amount of tax-payer funds invested in health IT initiatives. Without effective data exchange and integration, we are little better off with electronic health records than with the old paper-based charts stored in filing cabinets.

Providers today are in critical need of new technology tools and processes that can bring together disparate health data wherever it resides and make it accessible to the authorized clinician at any point of care. For maximum efficiency and effectiveness, this data needs to be verified for accuracy and consolidated into a single view that enables full engagement for the clinician. However, sharing health data can present numerous dilemmas, both logistical and technical. Common barriers include the lack of an appropriate IT infrastructure to enable connectivity needed to share information across different settings of care and the need to integrate various systems and applications operating on different platforms. Today, many health care providers are struggling with these issues which can be highly complex because the needed technology may not exist or, if it does, it is cost prohibitive once the purchase, implementation, training, and ongoing maintenance is taken into consideration.

A number of health care providers are reconsidering their vendor strategy based on their needs to easily aggregate disparate data related to patient care. The IT vendor community is aware of the growing need to address data integration challenges and we will likely hear more in the coming year about how a variety of market participants are responding with new products and services. We take a look at a new solution being offered by two industry-leading health IT companies and hear how one of their clients, a large integrated delivery system in Texas, is driving efforts in efficiency and coordinated care with better data integration across inpatient and outpatient settings.

Microsoft and athenahealth Partner to Address Data Integration Challenges

athenahealth is a leading health IT vendor with a suite of integrated, web-native products and services for ambulatory medical practices including athenaCollector for billing and practice management, athenaClinicals, a CCHIT-certified EHR, and athenaCommunicator, an on-demand, automated communication service. At the February 2011 HIMSS11 conference in Florida, the company announced a new strategic alliance with Microsoft whereby athena's web-based tools will be offered in conjunction with Microsoft's enterprise health data integration platform, the Amalga Unified Intelligence system. The new solution is designed to improve the core three-way connectivity and communication process between hospitals, physicians and patients as these stakeholders attempt to navigate a rapidly changing health delivery and payment infrastructure. Amalga is a software-based application designed to work with an organization's existing IT infrastructure, thus providing a cost-effective way to link together data from multiple IT systems into a central, continually updated, uniform view for analysis and data sharing. The new strategic alliance builds on athenahealth's and Microsoft's respective strengths in IT innovation. The joint solution provides customers with a flexible and cost-efficient tool that will facilitate the type of provider collaboration and care coordination that is at the cornerstone of new care delivery

models like patient-centered medical homes (PCMH) and Accountable Care Organizations (ACO). athenahealth's cloud-based EHR system and Microsoft's Amalga platform is currently in use at health care systems in Massachusetts and Texas. I recently spoke with Ryan Champlin, Vice President of Operations for Texas-based Cook Children's Physician Network, to understand how the combined solution works to address some of the challenges his organization is facing around the need for data integration.

The Cook Children's Health Care System - Building a Robust Technology Infrastructure to Support Coordinated Care

Cook Children's Health Care System is a nationally recognized pediatric provider headquartered in Fort Worth, Texas. The system is comprised of eight organizations that provide care across a variety of settings throughout the North Texas area including hospitals, specialty clinics, home care, and physician offices. Cook averages around one million outpatient encounters annually and serves a diverse population including some clinics with a high percentage of Medicaid patients. The Cook Children's Physician Network (CCPN) is the largest pediatric multi-specialty physician group in North Texas, employing just over 400 providers including three hundred doctors and one hundred Nurse Practitioners, Physician Assistants, and Certified Nurse Anesthetists. As the only children's health care system consistently mentioned in rankings of the nation's top integrated delivery systems, Cook Children's is very familiar with coordinated care and has extensive experience with Medicaid managed care as well as CHIP and STAR Health programs, all of which are analogous to the ACO model. Cook clearly understands the need to bring patient information together across dispersed settings. As Ryan Champlin explains, "We are used working together, which gives us a tremendous head start on being an ACO. The piece that we didn't have was the integrated data picture that would allow us to manage costs very well."

The situation at Cook represents a common scenario seen today across the U.S health care landscape including at integrated delivery systems, i.e., where outpatient physician practices use one EHR vendor while other providers in the system use a different vendor. In Cook's case, CCPN physicians use athenaClinicals EHR and the Cook Children's Hospital is on MEDITECH. To meet the challenge of getting these two separate EHR systems to share data, Cook selected the athenaNet-Amalga connector as the best solution to fit their existing needs and also help them prepare for a technology infrastructure to support any potential plans for forming an ACO which will lead to even more coordination among providers and patients.

Several issues were important to Champlin and CCPN as they investigated the process of connecting inpatient and outpatient data, including the obvious concerns with costs, training and

implementation timing. Champlin was also very focused on making sure the physicians were happy with the solution and engaged in the process. The physicians at CCPN had selected the cloud-based athenahealth solution after investigating various other vendors. The selection process for an office EHR can be a notoriously challenging undertaking and, as Champlin notes, “money doesn't necessarily buy happiness in the EHR market.” Cook has a very physician-centric culture so physicians were allowed to choose the product that best supported their work flow. It was important that the physicians be allowed to stick with the vendor that they felt most comfortable with, and, likewise, the hospital was not in a position to engage in a lengthy and expensive process to replace their legacy vendor. With the athenaNet-Amalga connector, “the physicians could have what they wanted and the hospital could keep what it wanted. And yet we could still have a consolidated, single source of truth for each patient”, explains Champlin.

Another feature of the athenaNet-Amalga connector solution that is very attractive to CCPN is its capability to integrate with Microsoft's popular HealthVault personal health record (PHR) platform. Cook is implementing a new program where data from Amalga, including athenahealth data, will be pushed or “auto-populated” into HealthVault. This feature has strong potential to enhance the overall patient experience and fits within Cook's broader goals of helping to better engage patients and their families now and in the future. “As pediatric providers, we fully hope all of our patients will graduate from us to adult care. (This goal) creates a great motivating influence on all of our physicians to make changes that will benefit their patients”, says Champlin. While Champlin notes that so far, patient engagement with PHRs has been sporadic at best, he is hopeful that the new HealthValult PHR tool will make is easier for patients and their families to use. Cook plans to actively promote this function in the future.

While Cook Children's is still in the early stages of implementing the athenaNet-Amalga Connector, Champlin and his colleagues are excited about the technology's capabilities for improving patient outcomes and cost efficiencies. One way Cook plans to gage success will be to look at ED throughput. “If the single patient view works, kids are going to get through the ED faster because the doctors are not going to have to start from scratch collecting information”, says Champlin.

No More Silos - Collaboration, Coordination, and Integration is the Future of Health Care

Cook's need to connect disparate data across various systems within an enterprise and/or among various settings of care is clearly an issue that a growing number of providers are facing today. The tumultuous and dynamic provider landscape is moving rapidly towards new delivery and reimbursement models based on coordinated care with an emphasis on outcomes-based and cost-effective treatments. We don't know at this point if the dominate market models will be

PCMHs, ACOs, or something else. We do know that health care providers are looking for efficiency, flexibility, and scalability to fit their changing needs around technology infrastructure. The athenaNet-Amalga connector is a low-cost solution designed to improve connectivity and communication between hospitals, physicians and patients. It is one viable option on the market today for organizations like Cook that need to rapidly deploy an integration platform to address current needs around Meaningful Use and help build out an IT infrastructure to plan for new collaborative care models like ACOs.

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