Meaningful Use and the Need for EHR Transformation

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This IDC Health Insights white paper, sponsored by Allscripts Inc., discusses the EHR optimization that is beginning as U.S. providers enter the later stages of EHR adoption and start to examine the met and unmet business needs for EHRs that were implemented to address the meaningful use requirements of the HITECH Act of the American Recovery and Reinvestment Act of 2009. While the meaningful use requirements were valuable in spurring investment in EHR, they were clearly limited in terms of addressing the full workflow, documentation, and decision support needs of healthcare organizations. As implementation of EHR continues, providers are increasingly recognizing the need to engineer workflows to complement EHR software and to help build on the benefits of and investments in EHR to further improve the quality of care and operational efficiency across care settings and in U.S. hospitals, health systems, practices, and clinics. To accomplish the goals of EHR, outside of the specific requirements for meaningful use, providers require flexible, agile, adaptive, and comprehensive systems that meet the needs of multiple departments and varied workflows.

This white paper examines the issues that providers are currently facing as they seek to optimize the EHR environment, and it presents three case study vignettes of Allscripts customers that have leveraged EHR to both meet meaningful use requirements and further add business value to their organizations. The key objectives of the white paper are to:

- Discuss the business value of EHR and opportunities for providers to further optimize EHR in the post-meaningful use era
- Understand the business goals for EHR and where providers have both succeeded and failed in first-generation EHR implementations
- Offer case studies and examples of best practices from healthcare organizations that have successfully gone beyond meaningful use to deliver business value from integrated, connected EHRs
# TABLE OF CONTENTS

IDC Health Insights Opinion 1
Methodology 2
Situation Overview 2
Solution Overview: Sunrise Ambulatory Care 3
   Best Practices in Ambulatory EHR 4
      Working Across Care Settings at Springhill Medical Center, Mobile, Alabama 4
      Connecting a Multivendor Environment at University Health System, San Antonio, Texas 5
      Improved Workflows at Bronx-Lebanon Hospital Center, New York 5
         Challenges/Opportunities 6
Future Outlook 7
Essential Guidance 7
METHODOLOGY

This white paper is sponsored by Allscripts and includes interviews of Allscripts customers provided as references by Allscripts. It is intended to offer insights into the business needs of EHR customers across the industry. The paper is based on secondary research by IDC analysts, several briefings with Allscripts, and interviews with three customers using the Allscripts platform, including Sunrise Ambulatory Care and Sunrise Acute Care. These interviews are discussed in case study vignettes in the sections that follow.

SITUATION OVERVIEW

In the United States, EHR technology has undergone rapid adoption driven by regulatory incentives that moved the technology from adoption in less than 30% of practices in 2009 to over 90% of practices, with the market nearing saturation at the close of 2015. This high level of rapid EHR adoption has led to many growing pains for ambulatory providers that struggle with issues like productivity, usability, and optimizing EHR applications to meet the demands of accountable care in the community. Even as EHR helped meet some goals, such as reducing medication and medical errors via electronic ordering, it has introduced new challenges as providers strive to reengineer workflows to make the most of the new technology.

Accountable care has unique demands for at-risk practices, particularly those participating in common models like the patient-centered medical home (PCMH); under these models, providers must collaborate across the community with other ambulatory providers in primary care and other specialties and also coordinate with inpatient hospitals to ensure proper evaluation and follow-up in the community post-discharge to avoid preventable readmissions. For this reason, many ambulatory practices and clinics have sought out EHR functionality that goes beyond basic clinical documentation and e-prescribing to facilitate collaboration and data sharing in the community, with other providers across care settings, to facilitate value-based care and also coordinate with inpatient hospitals to ensure proper evaluation and follow-up in the community post-discharge to avoid preventable readmissions. Healthcare reforms brought technology into practices, but value-based care initiatives, new business models, and declining reimbursements have also led to razor-thin margins for many providers; this situation has heightened attention on issues like productivity, operational efficiency, and revenue cycle optimization that help keep practices profitable and competitive in the emerging value-based care environment.

For ambulatory practices to be successful with delivering care under a mix of payment models, with patient populations including both traditional fee-for-service patients and new at-risk models like PCMHs, some key IT requirements are emerging:

- Open architecture can help clinic EHRs communicate with other providers in the community and other care settings and help facilitate transitions of care.
- Systems need to offer ease of use and configurable workflows to drive provider productivity while also leveraging mobile tools and other productivity drivers.
- Analytics capabilities should be used to understand costs, key issues, and variation in care; analyze physician and organizational performance; and allow for population health management capabilities to support fee-for-value environments like the PCMH.
- Integrate EHR with charge capture capabilities to support revenue performance under both traditional fee-for-service and new fee-for-value contracts.
- Strong supplier partnerships will assist providers in developing the agile computing environment that will be required to support current systems as well as future enhancements that will be needed as business models continue to evolve.

**SOLUTION OVERVIEW: SUNRISE AMBULATORY CARE**

The Allscripts Sunrise Ambulatory Care product is delivered on the Sunrise Clinical platform by Allscripts. The product may be used by ambulatory practices in integration with Sunrise Acute Care or Allscripts' other complementary ambulatory EHR products, Professional and TouchWorks. Sunrise Ambulatory Care's key feature is the solution's tight integration with the Sunrise Acute Care record and workflows, including those used in the inpatient, surgery, and emergency departments of the health system. Sunrise Ambulatory Care functionality includes ordering and order management tools, clinical decision support (CDS) tools and algorithms, documentation templates, lab and radiology results and result viewers, medication, allergy and problem lists, an analytics engine, and support of mobile devices for mobile workflows. Sunrise Ambulatory Care targets clinics that are owned by or closely allied with health systems and communities using Sunrise Ambulatory Care or that want to share data for collaboration through private HIE functionality, also provided by Allscripts under the dbMotion product line, with providers using EHRs from third-party suppliers. Sunrise Ambulatory Care and complementary products from Allscripts are designed as an open platform, supporting interoperability and data sharing in a diverse multisupplier environment.

Key features and functions that support the successful use of Sunrise Ambulatory Care and other products in accountable care environments include:

- **Open architecture.** The solution leverages modern Helios service-oriented architecture and can be used with the dbMotion private HIE for integration with either complementary Allscripts products or third-party products.
- **CDS capabilities.** The Sunrise suite is designed to support extensive decision support capabilities, allowing providers to configure rules to support meaningful use and other initiatives with in-software logic. A configurable rules engine for eventing can leverage vendor-supplied or configurable rules for decision support.
- **Configurable workflows.** In the battle for productivity using EHR, workflow is key, and the Sunrise platform is well known for its configurable workflow engines that allow providers to reengineer processes on their own to reflect current best practices, as they evolve. Sunrise's medical logic modules (MLMs) can be configured by clients onsite to create custom workflows to support individual departments and specific initiatives.
- **Sunrise and EPSi analytics.** Complementary analytics functionality, including reporting, clinical quality analytics, and EPSi cost accounting, is available on the Sunrise platform.
- **Health and wellness manager.** Health and wellness are increasingly important in the accountable care setting as at-risk providers seek to reduce costs and improve outcomes by keeping patients healthy. The health and wellness manager helps identify gaps in care – like the need for blood pressure checks, screenings, and immunizations – to assist in keeping patients well.
• **Document management.** While a paperless environment is the goal of most health systems, the reality is that some documents still exist on paper. Document management capabilities in Sunrise allow for scanning and faxing documents for storage electronically.

• **Daily schedule and patient tracking.** Scheduling can be centralized across the Sunrise environment or managed for individual clinics. The scheduling functionality is interoperable with both Sunrise scheduling systems and third-party products.

• **Inbox and secure health messaging.** With more and more communication happening electronically, secure communication between providers and patients is essential. The Sunrise Inbox assists with electronic communication and managing referrals as well as documenting telephone conversations that happen outside the system.

**Best Practices in Ambulatory EHR**

To illustrate the best practices in ambulatory EHR facilitated by the functionality of Sunrise Ambulatory Care and its accompanying Sunrise platform to support accountable care, IDC Health Insights spoke with three health systems that have used the product to achieve their goals in ambulatory care delivery.

**Working Across Care Settings at Springhill Medical Center, Mobile, Alabama**

At Springhill Medical Center in Mobile, Alabama, Vice President and Chief Nursing Officer Paul Read uses Sunrise Ambulatory Care in five ambulatory clinics that coordinate care with Springhill’s inpatient hospital, which uses Sunrise Acute Care. The health system has been using Sunrise since 2005 and added Sunrise Ambulatory Care to the environment in 2011. Sunrise’s new surgical module was added to the environment in 2014. Read reports that the system has been instrumental in interacting with patients as they flow through the health system’s inpatient and ambulatory care settings as well as the emergency room. He reports that the configurability of Sunrise’s workflow has been helpful to the center’s ability to restore productivity after going live on EHR because the center had failed to do all the needed process re-engineering during the initial implementation. According to Read, he uses Sunrise MLMs “to make the physicians comfortable – the small changes in triage, the tracking board, and additional areas were a strong start to winning over the physicians and helping them to see the effectiveness of EHR.”

The gains at Springhill are clear; Read reports that the 252-bed acute care facility has thriving cardiac, orthopedics, and obstetrics/gynecology service lines. The staff can use the system to capture documentation and show progression of patients across care settings. According to Read, "We do extremely well – the key thing about Sunrise is the ability to add to it, to change it to reflect new procedures and new types of notes" as needed by the health system.
Connecting a Multivendor Environment at University Health System, San Antonio, Texas

At University Health System in San Antonio, Texas, CIO Bill Phillips faced a complex challenge when he sought to grow clinical collaboration in a community heavily invested in systems from different EHR vendors. University Health System's acute care hospital was at the center of the local community and had Sunrise Acute Care installed since 2006; most ambulatory providers in the region were using EHR systems supplied by other vendors, but all of the providers wanted to collaborate more closely, regardless of the IT hurdles. The community chose to invest in dbMotion in a unique tripartite collaboration with Allscripts, in which University Health System and the local provider network split the cost and the integration burden for the benefit of collaboration.

University Health System's Sunrise Acute Care implementation was quite successful; the health system was one of the first health systems to receive Stage 1 meaningful use incentives and to complete a meaningful use audit by CMS. The hospital had completed over 7.6 million electronic orders and 17 million electronic patient documents by 2014. With all this valuable information stored electronically, the goal of the integration project was to create one place for providers to access clinical content — whether stored in Sunrise or elsewhere — to reference in care delivery. The information to be shared included diagnostic information, records of procedures and imaging, and even digital pathology, as the health system is one of the first in the country to digitize its pathology slides and make them available to providers across the care community.

Phillips reports that the benefits of the project have been huge and have accrued to improvements in care quality, the health system's ability to meet regulatory requirements, reduction in medical and medication errors, and care coordination. As the two health systems continue to collaborate, accountable care demands are growing, and the functionality has recently been extended to leverage FollowMyHealth's combined portal and PHR to help support chronic disease patients such as diabetics. Phillips states that his lesson learned is around process change and re-engineering, which the unique open platform collaboration has allowed his team to accomplish: "You can't just take what's on paper and make it electronic; you must change processes and adapt as an organization ... constantly continue to work with physicians, improve processes and workflows to see value from EHR."

Improved Workflows at Bronx-Lebanon Hospital Center, New York

At Bronx-Lebanon Hospital Center, Dr. Robert Leviton, the health system's Chief Medical Information Officer, recounts how the health system chose Sunrise in 2008 to replace the health system's acute care clinical system and to integrate care across the health system's inpatient and ambulatory centers as well as to share data with the local Bronx RHIO. Bronx-Lebanon chose Sunrise because of the single platform and minimal need for integration, in addition to its workflow configurability. Leviton reports that the implementation of the acute care system was rapid; the health system was able to get running on about 30 modules supporting the emergency department, acute and ambulatory care settings, pharmacy, order entry, and other areas within 18 months. The health system's intense focus on value-based care initially led it to focus...
on building and custom-configuring workflows to manage length of stay and to improve its case-mix index and reduce denials by improving documentation while keeping physicians productive. Before long, the workflow-specific strategy was extended to include allied health documentation, care management, and planning, as well as surgical care. Bronx-Lebanon went live on the newest module, Sunrise Surgery Care, in 2013. The workflow enhancements made at Bronx-Lebanon focused on creating workflow elements that allow physicians to get documentation done in a single, smooth process, with a minimum of extra clicks, to meet the doctors’ needs and automate reviews upon completion of documentation elements. The strong workflow focus was rewarded in the hospital’s stellar May 2014 Joint Commission audit, as Leviton reports.

Leviton also reports that the configurability of the Sunrise system allows for a more agile and more responsive health system. According to Leviton, "The open platform allows us to create workflows that are unique to Bronx-Lebanon without going to Allscripts for help." The health system leverages a team of developers in Pune, India, to bring new workflow specifications into the system quickly, often overnight. In one example Leviton cites, a new New York law was created that required the health system to share pending test results with patients at discharge; the law was passed on a Friday and was implemented in the system by Monday. Leviton states, "The open platform creates the opportunity to build workflows and meet the needs of the hospital in a consistent and precise manner.” Results are also clear, as the health system reports that it has been able to cut average length of stay from 5.7 days to 4.8 days, reduce preventable readmissions, and drop claims denials from 14% to 7% using the documentation tools. Physicians have clearly caught on, as a high number of requests for new workflows demonstrate their investment in the effectiveness of the processes.

Challenges/Opportunities

The case studies presented in this white paper offer the insights of providers that have selected Allscripts solutions and describe their issues and challenges; many solutions are available to meet these challenges. Healthcare providers selecting EHRs today are challenged by the continuous pace of change that is occurring in the industry. The move to value-based care has resulted in shifting business models and new requirements for agility and productivity in order for providers to be successful. The challenge for health systems is managing this continued environment of change alongside the instability seen among ambulatory EHR suppliers. While EHR was well supported by incentives initially, declining meaningful use incentive payments in subsequent stages have placed pressure on suppliers and end users that still need to comply with regulatory mandates and make the best technology choices possible. Providers should challenge themselves to choose EHRs and other products that deliver meaningful improvements in clinical quality and efficiency at reasonable cost and to ensure that they select products that will assist them in the transition into accountable care/fee-for-value environment.

With so many suppliers to choose from, providers are challenged to select the right supplier partners for EHR to support accountable care and also allow them to leverage their data in data sharing, collaboration, and analytics. Providers need to partner with IT suppliers that will persist – keep up with regulatory compliance demands, are financially stable, and are aligned with their customers’ vision for the future. Opportunities exist to profit and prosper under accountable care and deliver better care for patients, if the transition is done properly and well supported with a flexible, agile, open architecture IT.
FUTURE OUTLOOK

As the Springhill Medical Center, University Health System, and Bronx-Lebanon Hospital Center case studies illustrate, providers’ specific needs for EHR functionality vary by market, according to the competitive situation, the demands and incentives for accountable care, and the priorities of individual provider organizations. However, the overarching needs for flexibility and agility to adapt to change and to address workflow issues created by the introduction of EHR are common among most health systems. Future expectations for the ambulatory EHR space include:

- Continued pressure on productivity of providers using EHRs to deliver care in ambulatory and inpatient settings will force most hospitals to examine and optimize workflows, both by changing human processes and by demanding workflow software changes and configurability from all suppliers.
- Continued penetration of fee-for-value contracts in both independent and hospital-owned practices will drive the need for more extensive analytics, costing, and population health and risk management tools, as well as more sophisticated decision support, to be incorporated into the EHR workflow.
- More complex patients with multiple chronic diseases will drive the need for additional care planning and management and resulting workflow and analytics capabilities.
- The need to share data and capabilities among care teams will intensify as accountable care populations and their management needs grow — open architecture will be a critical success factor in network-based care environments.
- Regulatory compliance demands will only grow; while meaningful use is stabilizing and moving to later stages, it is clear that although EHR has solved many problems, it has also created new vulnerabilities in care delivery practices. Providers should expect more regulation to address these emerging workflow issues as EHRs come under further scrutiny.
- Open architecture; cloud-based, agile systems; and multisupplier environments will become more common as the demands of the marketplace require innovation and agility that go beyond the support capabilities of single vendors. An ecosystem of complementary and interdependent systems will grow and evolve to support care delivery, advanced workflows, and data-driven environments.

ESSENTIAL GUIDANCE

IDC research shows that the majority of ambulatory EHR end users are dissatisfied with their EHR; given the data, it is clear that most EHR vendors have failed to meet the expectations of customers, whether with the products themselves or with service relationships. Actions for providers to consider include:

- Improve relationships with suppliers. While the high level of adoption may make the EHR market seem mature, its products and customers are not. Suppliers are still working to get ahead of meaningful use requirements and build real workflow and usability capabilities into products and to upgrade platforms to allow flexibility, agility, and interoperability. Providers have adopted EHRs rapidly, and many have failed to understand the implications of the technology for their business or to optimize it as they have done so, and the EHR software that is available may not support reengineering efforts in many installations. Ambulatory providers
should seek trusted partners among their EHR suppliers — suppliers that not only have expertise in building and implementing software but also understand providers' business goals and objectives. Attention to user interface details, availability of mobile tools, and enhanced analytics and functionality to support healthcare reform are also valuable additions that will enhance return on EHR investments.

- **Get the basics right.** Providers want functional, usable EHRs to meet business needs and regulatory requirements and prepare them for future business model changes. Bells and whistles don't matter if vendors are failing on the basics like workflow. Providers should look for add-on functionality that addresses productivity and business needs and for flexible agile platforms that are open should third-party functionality be required in the future.

- **Join user groups.** Peer-to-peer interaction provides key lessons learned to those getting started with or optimizing EHR to address new business models. Organized user groups provide an opportunity for customers to meet suppliers, build relationships, and create peer-to-peer interactions that allow users to share ideas on efficiencies with the product.
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