Perspectives and Updates on
Health Care Information Technology

HIT Perspectives

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May 2015

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By Tony Schueth, Editor-in-Chief

Poet Carl Sandburg called Chicago "The City of the Big Shoulders." Its big shoulders were definitely needed for the 2015 meeting of the Healthcare Information and Management Systems Society (HIMSS). This was the largest HIMSS conference yet, with a record-setting 1,300 exhibits and 43,000-plus attendees.

The Point-of-Care Partners (POCP) team used its time productively via face-to-face discussions with stakeholders, attendance at presentations, discussions with exhibitors and investment in a lot of shoe leather. Here are our observations about this year's meeting.

1. **FHIR.** The biggest buzzword at the meeting was FHIR (Fast Health Interoperability Resources). It's among the newest in HL7's family of standards, and everyone is excited about its simplicity and potential, especially because it will facilitate the exploding use of application program interfaces (APIs) developed in response to meaningful use (MU) stage 3 and other drivers. FHIR is a modern web services approach used by Yahoo, Facebook and Google, among others. It is data-centric, which makes it easier for systems to exchange discrete pieces of information. This contrasts with the document-centric approach of C-CDA (Consolidated Clinical Document Architecture), in which the exchange of entire documents is required. FHIR also allows access to smaller or "granular" data elements that are not included in some clinical documents. The ability to isolate and exchange well-defined pieces of patient and clinical data has been a pressing need. While FHIR's potential is exciting, the jury is still out as to whether it will catch fire (pun intended) or flame out.

2. **Interoperability.** Interoperability has been highlighted at HIMSS the past several years. It took on added importance and buzz this year because of recently announced efforts by the Office of the National Coordinator for Health Technology (ONC) to address the perceived need for truly interoperable health care. Ironically, it was hard to find a lack of interoperability among the HIMSS15 vendors. Everyone seemed to be showcasing how easily their products connected to the health information technology (healthIT) ecosystem.

3. **EHRS.** In past years, electronic health record (EHR) vendors hyped the "next big thing." There seemed to be a dearth of that this year. Instead, vendors emphasized existing products that are improved and easier to use. Process improvement was much in evidence. We suspect that vendors this year are reacting to providers who've said they are frustrated with their EHRs to the point of replacing them and considering opting out of MU.

4. **Population health.** The importance of data analytics was reinforced in the focus on population health at HIMSS15. The 26th Annual HIMSS Leadership Survey, which was unveiled at the meeting, highlights the importance of healthIT-driven population health management, patient engagement and strategic planning to improve care quality and delivery. The survey shows strong executive support for adoption and use of healthIT infrastructure, such as clinical analytics. The move toward better data and analytics was typified by the collaboration by NextGen and Milliman to license new

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technologies that offer risk analysis and predictive modeling, which will facilitate population health management and collaborative care initiatives. Milliman will be in charge of stratification and analysis of Medicare patient data, the exchange of health data among providers and patient risk scoring. NextGen will be responsible for managing EHR work flow and addressing collaborative care management processes. This is a great example of how the results of data analysis and modeling are being made actionable within the physician's EHR work flow.

5. Patient engagement. With the related requirements under MU stage 3, it's no longer a matter of when patient engagement will happen but how to expand it. Personal health records were barely represented and have been relegated to "yesterday's news." Portals — "the" solution from last year — are evolving to a "portal of portals," consolidating access to multiple sites in a single view, driven by the recognition that patients won't log in to multiple Web sites to access data from each of their physicians. They will consolidate data obtained from wearables, monitoring devices and other innovations, expanding consumer involvement. However, this raises the question of what a clinician finds valuable versus what is "noise." What was missing was how to motivate patients to become — and stay — engaged. Research shows that use of health and wellness technologies tends to drop and stay off after an initial surge. Humana President and CEO Bruce Broussard clearly had some solutions for that from a payer standpoint. We think it's this kind of collaboration among health care stakeholders that will lead to the answer of the question of how to keep patients motivated to become true participants in their health care.

6. Medication management. Pharmacy traditionally has been underrepresented at HIMSS but is now coming into its own, if this year is any indication. There were sessions about ePrescribing (such as how it's progressing in Europe) and medication management (such as a patient-centered pharmacy home for the chronically ill).

However, what really brought home the rise of medication management at HIMSS was the first-ever pharmacy-related keynote by Alex W. Gourlay, Walgreen's president and executive vice president of its Boots Alliance. The world's biggest drug retailer, Walgreens has more than 8,200 stores in the US alone and 4,500 more that are branded as Boots in Europe. Gourlay talked about Walgreens' traditional line of business but then provided a twist: Walgreens' movement to technology-driven care management. He shared his vision of how the company will use various technologies, such as mobile video calls with doctors to teleprescribe antibiotics and the medication reminder app Walgreens developed for the Apple Watch, among other things. This definitely signals a change in the world of medication management and will create related opportunities in the world of healthIT.

7. Size matters. HIMSS is one of the country's largest meetings of any type. Its size is both a blessing and a curse. On one hand, just about everybody in the healthIT world is there, making networking and building of business relationships efficient. It is truly one-stop shopping, which creates value for the investment of time and resources it takes to be there. On the other hand, the size of the meeting makes it impossible to see all the exhibits and attend very many sessions. Moreover, HIMSS really needs to think about the education sessions that were sparsely attended because of competing opportunities, for sure, but perhaps also because they require proposals to be submitted so many months before the event, making many of the sessions irrelevant when the meeting occurs. By the way: the calls for 2016 closed on May 1 for educational sessions and June 15 for other proposals.

All in all, HIMSS15 was a valuable — if exhausting — meeting. Let us know if you need any help with the trends and opportunities emanating from the big event.

See you next year in Las Vegas.

2 **Part 2:** The Impact of MU Stage 3 on Patient Engagement

By Michael Solomon, Senior Consultant

The newly issued draft rule for meaningful use - stage 3 (MU3) has greatly expanded requirements for patient engagement. Point-of-Care Partners (POCP) believes this area has huge potential for the future. Here is our high-level take on MU3 and its impact on patient engagement.

A glide path to MU3. The new regulation proposes a glide path to ramped up requirements for MU3, which is required for everyone beginning in 2018. In the meantime, the new rule suggests changes to MU stage 2 that would significantly reduce requirements for patient access. To meet the requirements under the proposal, only one patient has to view, access, download or transmit records — and that is down from a paltry 5%. The government is responding to industry feedback that this requirement has been very challenging to meet.

Impact of MU3 Objective 5. The first Objective 5 measure requires that 80% of patients be provided online access to view, download and transmit health information within 24 hours of availability. On first blush, this might not be so easy to achieve. It sounds like a lot but actually within the realm of possibility for many large health systems, accountable care organizations (ACOs) and even individual practices. Many have been ramping up to provide patient access via portals and other means in response to MU2 requirements as well as the emerging business case for practices and organizations involving value-based care and reimbursement. It should be noted the measure only requires that eligible professionals (EPs) provide access and instructions for accessing the information. This should help EPs meet the 80% threshold.

The government hopes that innovation and interoperability can be achieved for this and many MU3 objectives through the use of application program interfaces (APIs). The emphasis on APIs creates opportunities for technology entrepreneurs to spur patient engagement by providing innovative means of online access and communication mechanisms.

The potential of APIs can be seen with the launch of the Apple Watch. For example, Anthem and CareEvolution announced an Apple Watch application (app) called the comprehensive Family Health Record (cFHR), which is available as a free iPhone download. The app is designed so that consumers may easily and conveniently receive alerts, review new medical information and manage their health care from their wrist. Consumers would be notified of suggested preventive screenings, gaps in disease management and prescription refills, and potential drug interactions, the companies said.

Measure 2 of MU3 Objective 5 builds on MU2 measures by requiring EPs to provide patient-specific access to educational resources based on "clinically relevant" information in the electronic health records (EHRs) for 35% of patients. This is an easy way to engage patients and provide value, especially from the patient's point of view. Pharmaceutical manufacturers and other content sources willingly provide in-depth educational content for various conditions. We see a big opportunity for API developers to provide innovative ways for furthering this kind of patient engagement.

Moreover, many organizations can achieve this MU3 Objective 5 measure — and many Objective 6 measures, for that matter — simply by targeting their chronic disease populations. Eligible professionals and hospitals adopting value-based care strategies are already targeting these populations. As a result, many are in a position to build on what they've already got in place to increase communication and engagement with a significant number of their patients with chronic illnesses.

Impact of MU3 Objective 6. Measure 1 of Objective 6 requires engagement of 25% of patients by viewing, downloading or transmitting their health information to a third party. Measure 2 requires that 35% of patients must

send or receive a secure message. Patient health data must be recorded in the EHR for only 15% or more of patients to meet Measure 3. Some of these Objective 6 measures are increased from MU2, such as secure messaging increasing from a low 5%. Meeting all of these measures sounds daunting, but EPs only need to meet 2 measures to satisfy the objective.

The Centers for Medicare and Medicaid Services (CMS) hopes that API developers will come forward with solutions that make Objective 6 measures more easily achievable. Providers are already aware of the potential, such as in the area of mobile health. According to a recent survey, nearly half of health care professionals would like to incorporate smartphone apps into their practices within five years and 72% believe that health apps will encourage patients to take more responsibility for their health. Patients also are coming onboard. Survey results indicate that 32% of mobile health app users share information collected by apps with their doctors. This certainly bodes well for new and expanded products that sync with the MU stage 3 requirements.

To ease the burden of achieving these measures, the government has increased the kinds of communications that count toward the goal. They include secure messages from the care team; data from such providers as nutritionists and physical therapists; data from the patient him/herself or an authorized representative; and fitness data from a wearable. These expanded data sources also should make it easier for providers to achieve the goal as well as create expanded patient engagement opportunities.

Patient engagement will increase by allowing authorized representatives such as caregivers access to a patient's health information, which counts toward meeting MU3 Objective 6. This is crucial because so many elderly and chronically ill have others in charge of their day-to-day care, who will benefit from having more complete information about their patients. This new MU3 requirement opens new doors for patient engagement. APIs can offer new tools to do so, and the government is hopeful they will. Alternatives such as Blue Button already are available and gaining traction.

MU3 Measure 3 calls for EHRs to collect patient-generated health data for 35% of patients. To be sure, there is a lot of complexity involved in gathering, vetting and storing patient-generated data in the EHR. We believe that this is a huge opportunity for innovation for entrepreneurs and API developers, as well for mainstream EHR vendors,

who can use such functionality as a market differentiator.

MU3 is only part of the story. MU3 will help drive patient engagement, but it's not the only driver. As we have noted in previous issues of HIT Perspectives, the move toward value-based care — especially the advent of ACOs — is also a powerful driver for patient engagement. Both public and private payers have recognized the value of patient engagement in terms of reducing costs, improving outcomes, and increasing patient satisfaction. This was underscored by findings of the 26th Annual Leadership Survey, sponsored by the Healthcare Information and Management Systems Society (HIMSS), which found that patient engagement is a success factor. Nearly three-quarters of respondents reported that consumer and patient considerations — such as patient engagement, satisfaction and care quality — would be the top business issue for their organization over the next two years. Again, this is in sync with MU3's intent and time frames.

Moreover, such topics also are measures on which providers are graded and paid. Money talks and this creates the business case for driving patient engagement at the provider level. The results of the HIMSS survey make that clear.

However, the business case for providers concerning patient engagement is only part of the story. Tools are needed to make more and better patient engagement a reality. This is where MU3 comes in, providing additional impetus and a roadmap for what needs to be done technology-wise — both for EHRs and EHR add-ons using APIs. Now vendors have their own business case to build new features to meet the requirements.

What happens next. It remains to be seen how MU3's percentage measures survive public scrutiny. Our guess is that the objectives will remain the same, but some of the measures may be ratcheted downward to make them even easier to meet. That certainly has been the practice in the past — especially in response to pushback from provider organizations, which undoubtedly will be very vocal when it comes to MU3. Moreover, MU3 is the government's last chance for rule making for this program, so it is logical that the proposed measures are more aggressive than some might have anticipated. On the other hand, we believe that MU3's objectives and measures will help drive patient engagement, with the business case from value-based purchasing acting as an afterburner.

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May 2015
HIT Perspectives

Part 3
Meaningful Use Stage 3: What Does It
Mean for EHR Vendors?

3 **Part 3:** Meaningful Use Stage 3: What Does It Mean for EHR Vendors?

By Michael Burger, Senior Consultant

The federal government recently released the long-awaited draft rule for meaningful use stage 3 (MU3). Everyone is still digesting the 301-page regulation and trying to figure out what it means. We at Point-of-Care Partners have plowed through it and done the analysis.

In short, MU3 expands some previous measures, such as electronic prescribing and clinical quality measure reporting. Moreover, MU3 significantly expands patient engagement and reporting requirements for public health entities and disease registries. Not surprisingly, there is new emphasis on the required use of application program interfaces (APIs), which is one way for the government to address the perceived need for interoperability for electronic health records (EHRs). The comment period closes on May 29, and we most likely will see the final rule in late summer.

Here is our initial take on how MU3 impacts EHR vendors.

Where are things going? We expect the large and top medium-size EHR vendors will continue to build to the new MU3 requirements. Their business models have dealt almost exclusively with meeting MU requirements over the past few years, so they know the drill and how to do it profitably. Plus, they have 2 to 3 years to adapt. Under the proposed rule, eligible professionals (EPs) would have the option of moving to MU3 in 2017, and all EPs would begin reporting on MU3 in 2018, regardless of their previous participation.

There is the opportunity for the remaining EHRs to go where the Big Boys ain't: non MU-certified products. Right now, a substantial portion of the market (between 30% and 50%, depending on which survey you rely) isn't motivated by MU and is not necessarily looking to buy an MU-certified EHR. To be sure, a good number of those are hard-core resisters who have not bought EHRs because they don't perceive a return on the investment and thumb their noses at government mandates. Yes, they will be hard to convince. However, the world of electronically enabled health care is

not going away and even the laggards know in their heart of hearts that they must eventually adapt or quit practicing. They can be won over if presented with the right mix – heavy on easy-to-use functionality that complements the work flow, instead of controlling it, and at the right price.

Many opportunities for smaller EHR vendors are created by the non-MU crowd that are focused less on government incentives and MU and more on how EHRs can be integrated into their work and work flow. The needs of small and specialty practices aren't well met by one-size-fits-all solutions, so there is opportunity from practices that are disenfranchised with their existing EHRs and those that have not yet adopted.

What about those APIs? We've had a strong hint that APIs were on the horizon for MU3 when their use was recommended heavily in last year's JASON Report, by federal advisory committees, and the Argonaut Project, which seeks to make health data sharing easier by using Internet-based open messaging and documents standards.

According to the Webopedia, an API is a set of routines, protocols and tools for building software applications. It specifies how software components should interact and makes it easier to develop a program by providing all the building blocks. Many operating environments provide an API so programmers can write applications that are consistent. APIs are also specified by websites. For example, Amazon and eBay APIs allow developers to use the existing retail infrastructure to create specialized web stores. Third-party software developers also use Web APIs to create software solutions for end users.

So, what about APIs in health care? The Centers for Medicare and Medicaid Services (CMS) and the Office of the National Coordinator for Health Information Technology (ONC) hope developers will create low- or no-cost APIs to facilitate interoperability across EHRs. MU3 requirements

for expanded patient engagement are aimed at fostering entrepreneurial API developers that are looking to break into healthcare through this market. Venture capitalists seem ready with open wallets. According to one estimate, for example, digital health funding skyrocketed to $5.3 billion in the first three quarters of 2014.

We believe the bigger question is not one of APIs but the business rules around them. That could play out in several ways. Analogously, there are two basic models in the smartphone development marketplace. Apple tightly controls developer access to its infrastructure and only allows approved applications (apps) to be available in its environment. It is a pay-to-play proposition for developers, with Apple keeping a percentage of revenue. The Android market is much more free-floating; there is no entity acting as a traffic cop and revenue sharing is not mandatory. The latter model is less costly to administer, which may appeal to the government, but provides less quality assurance for each app. Who will decide how it goes: the market or the government? And what about liability? If your $0.99 game app doesn't work you can delete it with little risk.What happens if your health care app misfires and a patient is harmed as a result?

Many other questions will also need to be addressed. For example, is ONC certification of APIs enough to ensure that it doesn't become the "Wild West" out there? (See details in ONC's 2015 draft certification rule.) By the government's implied admission, previous EHR certification efforts were not fully successful in creating interoperability. Will it be any different with APIs? Then, there are standards. APIs may use open source as well as standards that are not mature and/or proprietary. How does their required use in MU3 relate to the standards development process and interoperability down the line? Another question concerns how EHR vendors and consumers will be protected so they are not left holding the bag if API developers decide to substantially increase prices or suddenly go out of business. Will this create an expanded role for ONC or a void for another entity to fill, such as a stakeholder coalition? What about privacy and security? Will there be an appetite for an explosion of APIs or will the dearth of business rules make an already confusing and complex environment even more confusing and complex?

Patient engagement. Payers, including Medicare, have come to realize that when providers interact directly with patients, better outcomes and lower costs ensue. MU3 supports that premise and is seen to dovetail with many value-based purchasing programs being created in the public and private sectors. Coupled with the requirements for APIs, MU3's

emphasis on patient engagement opens the door for those entrepreneurs and investors who are rapidly discovering the potential in patient-facing health information technology. We're already seeing an explosion of wearables, in-home monitoring, health applications for smartphones and other technology-enabled ways for patients (and their authorized representatives, which is a new MU3 requirement) to weigh in on their health care.

EHR vendors must decide how they want to become involved in the patient engagement environment — in terms of technology and content. API developers will require access to EHR data to help providers target interventions and educational opportunities. Some would like to capture the "digital exhaust" (valuable consumer information) for other purposes, such as providing aftermarket solutions to pharmaceutical companies or their own data analytics endeavors. EHR vendors will need to decide policies, costs and technology so as to ascertain how such and under what circumstances access can be realized. Privacy and security issues will need to be addressed.

Public health and disease registry reporting. MU3 expands requirements for reporting to public health entities and disease registries. These requirements specifically address how EPs must actively engage in immunization registry reporting, syndromic surveillance reporting, case reporting, public health registry reporting, clinical data registry reporting and electronic reportable laboratory results reporting. This represents a major shift for EHRs, the variety of entities involved in reporting and the types of data that must be exchanged. APIs may be applicable to help streamline such reporting. There is also an opportunity for smaller EHRs to fill reporting voids that exist for certain specialties. Other opportunities include helping states and others in charge of these registries and public health functions to respond to the influx of data coming across their thresholds from providers' EHRs.

The bottom line. MU3 introduces only a few new requirements for providers while ratcheting up achievement levels of measures from previous versions. From a certification perspective, EHR vendors are faced with a slew of new certification, standards and technology requirements, such as APIs. Certification, especially in the face of waning interest in MU among physicians, remains a significant cost of doing business for EHR vendors — the opportunity cost of which is innovation to make EHRs easier to use.