Perspectives and Updates on
Health Care Information Technology

HIT Perspectives

Biopharma Insights

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April 2018

Point-of-Care Partners helps Life Science and Biopharmaceutical companies develop EHR and Health IT strategies to increase product adoption, drive growth, and help their healthcare customers succeed in the world of value based care.

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1 Part 1: Apple's New App for Personal Health Information: Is It a Game Changer?

By Brian Bamberger, Life Sciences Practice Lead

Apple recently **announced a new application (app)** that enables patients to aggregate much of their personal health information from various providers and see it on their iPhones. Apple's Health app extracts the information — including data on allergies, conditions, immunizations, lab results, medications, vital signs and procedures — from the providers' electronic health records (EHRs). The app takes the data from the EHRs and brings them together in a new personal health record (PHR), which is available at any time and any place.

Is this a game changer? It may be too soon to tell, but the industry is ripe for disruption and this has the potential to be a disruptive technology.

The app is being pilot tested with a handful of hospitals and health systems whose EHRs (primarily Epic) represent a large but incomplete portion of the market. And now **Apple just announced that 39 health systems** are adopting the new Health app. It is worth noting that many of these health systems use only one EHR; as such, there is a more limited need to share data with patients seeing providers outside these health systems.

Impact on stakeholders. Apple's new app will definitely impact numerous stakeholders. Here are some:

Apple. This could be advantageous for Apple by addressing several challenges. Health creates a new and potentially large niche market, which could help boost sagging iPhone sales. The Health app has the force, branding and cache of Apple behind it, creating a competitive advantage.

Use of this app requires the consumer to have a top-of-the-line iPhone, creating hardware demand for Apple. However, this shortchanges many smartphone users. Half are using Android-based technology and many people cannot afford a pricey new iPhone. In addition, the economically disadvantaged and the elderly, who tend to live in the digital divide, are being frozen out of this opportunity. On the positive side, this offering addresses the reason for the demise of early personal health records initiatives — requiring the consumer to add information from multiple providers to their own PHR.

A significant drawback is that, at least initially, there is no data pathway back to the physician's EHR. Such a pathway would be beneficial for many reasons, such as correcting mistakes patients detect in their health information or in the event they are seeing a provider outside the health system that provided the data.

EHRs. Apple's new app is not an immediate, direct threat to EHRs, which still must be used to capture patient information at the point of care. That said, Apple Health is a large shot across the bow to EHR vendors about accessability of their data and new ways to achieve interoperability.

The app could be revolutionary on the technical side. Apple Health is touted as being able to reconcile the disparate code sets and uncodified data among hundreds of different EHRs available in the market. This issue has challenged interoperability between EHRs for a long time. If the reconciliation capability is as advertised, it opens the door for vendors to leverage Apple as the interface engine. Rather than developing to each EHR's application program interface (API) or attempting to map code sets, vendors can instead develop to Apple's API, which will enable connectivity to all EHRs.

The app also could be a game changer by addressing another long-standing challenge: patient identification. A separate patient identifier is not needed. To use the Health app, patients must

identify themselves by logging in through the provider's patient portal. Assuming that patients opt in, patient identification will be solved. Patients traditionally have not been motivated to access provider portals except in these large health systems that are part of this pilot project. So, the jury is out as to whether patients will opt in to the Apple model.

Standards. Apple's Health app is based on FHIR (Fast Healthcare Interoperability Resources), a new standard that is viewed as a game changer in its own right for app development. Now that FHIR has been demonstrated effective, developers can create all kinds of FHIR-based solutions to enable access to clinical data. This access could ultimately change how EHRs are used. Spurred by requirements of the 21st Century Cures Act, the health care app market is already robust; Apple's FHIR-based entry adds more spark.

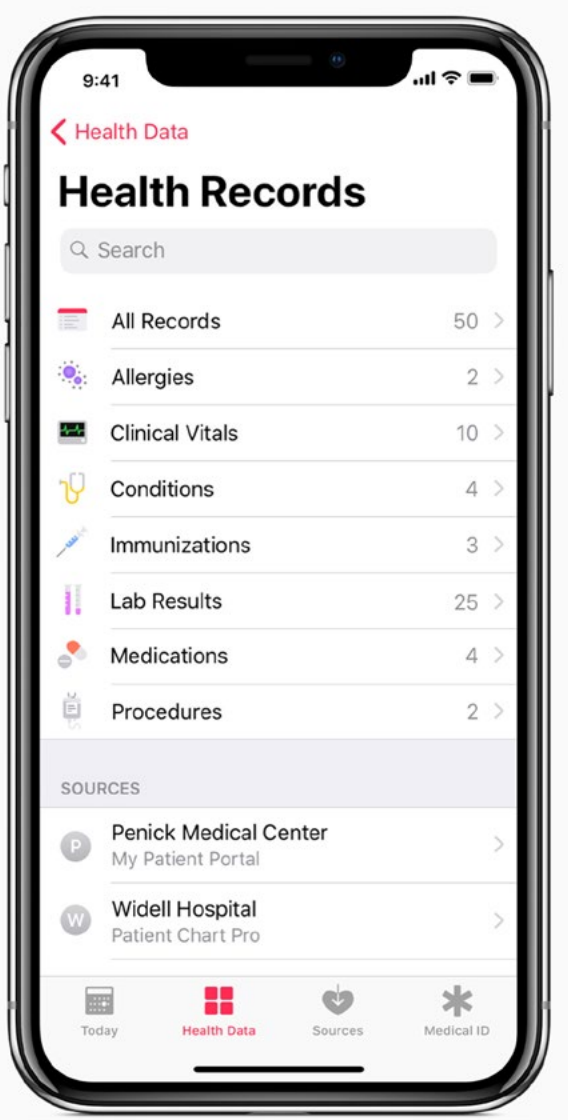
Patients. Time will tell whether patients will get onboard with Apple Health. This approach could be appealing to many patients, especially younger ones for whom use of mobile devices is second nature. App use could increase patients' engagement in their care, which has been a goal in search of a solution.

There is no guarantee, though, as to whether patients will want or use Apple's Health app. Patients claim they want more access to and control over their data, but there is little evidence they are motivated to make that a reality. The health care landscape is littered with failed or underused PHRs, including those offered by Google and Microsoft.

Even once they've opted in, there's no assurance that patients will comprehend the information once they have it in hand. Information must be understood if it is to have value and be acted upon. Medical care is a black box for most people and health literacy generally is very poor. Patients will not use an app if it overwhelms them with information they cannot comprehend.

Moreover, there is no guarantee that increased access to data leads to improved outcomes, regardless of how much patients learn to care about their information.

Pharmaceutical companies. Pharmaceutical companies can start taking advantage of the opportunities created by the Health app and the others that are sure to follow. They can work with developers to create apps that are useful to consumers, easily installed, available 24/7 and customized to a patient's health



measures. Apps can help caregivers and patients turn massive amounts of medication data on their phones into actionable insights or practical use. For example, medication lists in the patient record can be used to create calendar reminders and help patients monitor their adherence. Apps using data in the PHR could collect additional symptom information or use the data to coach patients through an episode of care. Leveraging personal health data, apps also can help patients determine if they are eligible for clinical trials, as well as monitor their progress and report results. •

Apps are revolutionizing health care. Apple's new Health app is the tip of the iceberg, although its impacts likely won't be felt for awhile. Want to learn more? Reach out to me at **brian.bamberger@pocp.com**.

2 Part 2: 10 Takeaways from HIMSS18

By *Tony Schueth,* Editor-in-Chief

Another annual meeting of the Healthcare and Information Management Systems Society (HIMSS) is in the books. While some people still think it's too big and overwhelming, we think it remains — without a doubt — the best place to catch up with clients and gain insights on market innovation. The Point-of-Care Partners (POCP) team used its time with face-to-face discussions, presentations of our own and attendance at others, discussions with exhibitors and investment of a lot of shoe leather.

There are plenty of reports on various aspects of HIMSS18. We'd like to offer a longer view and give our insights on the trends we observed in Las Vegas and how they might impact the health information technology (health IT) industry in the year ahead. Here are our top trends from HIMSS18:

1. Accessibility and control of patient data.

Accessibility and control of patient data have been on the radar for several years, but they took center stage at HIMSS18. There were many vendor offerings and a lot of buzz about **Apple's new Health application (app)**. The Health app enables patients to aggregate much of their personal health information from various providers and see it on their iPhones. This new kind of personal health record (PHR) is available anytime, anywhere. Is this a game changer? It may be too soon to tell as pilot testing is under way; however, it is an example of disruptive technologies we will see more of in 2018. **Click here for our take on Apple's Health app.**

Also of note was the rollout of three government-sponsored solutions to empower patients through new ways to access to their health data. Two were announced in a keynote by Seema Verma, who heads the Centers for Medicare and Medicaid Services (CMS). One is the government-wide initiative called **MyHealthEData**, which is spearheaded by the White House Office of American Innovation. It aims to "empower patients by giving them control of their health care data and allowing it to follow them through their health care journey." MyHealthEData will enable patients to get an electronic copy of their entire health record, which can then be shared among providers, regardless of site and geographic location. The second new product is called Blue Button 2.0, which is a "developer-friendly, standards-based [application programming interface]." Administrator Verma touted it as a new and secure way for Medicare beneficiaries to access and share their personal health data in a universal digital format. There were high hopes for the original Blue Button, which was an early PHR that never seemed to gain much traction.

With much less fanfare, the Department of Veterans Affairs **unveiled the beta version** of its Lighthouse Lab initiative. This initiative enables health IT developers to leverage open application programming interfaces (APIs) and Health Level 7's (HL7) FHIR standard (see below) to expand veterans' health data access.

It remains to be seen how these three government solutions complement each other and if they will have legs.

photo credit: Oscar & Associates for HIMSS

2. **Artificial intelligence (AI).** Every HIMSS meeting seems to have a buzzword and AI is the one for 2018. Maybe it's because of the focus on AI to improve the data analytics needed for the transition to value-based care. Maybe it's because there were a ton of AI vendors in the exhibit hall, including IBM (which was demonstrating the many new advances from Watson Health). Maybe it's because AI is among the Trump administration's major health IT priorities, as enunciated in Jared Kushner's keynote. Maybe it's because of the big announcement that Epic is joining forces with Nuance AI to integrate the latter's AI-powered virtual assistants — which have conversational functionality — into the electronic health record (EHR). The goal is to enhance how physicians and care teams capture and retrieve patient information. All of the new tools will run on both iOS and Android mobile devices. This strikes us as the kind of innovation that we are sure to hear more about this year.

3. **Block chain.** Block chain — a kind of secure electronic ledger — debuted last year at HIMSS as one of health care's shiniest new objects. Although some people think it is overhyped, many stakeholders jumped on the bandwagon nonetheless. We are seeing use cases emerge. Many were showcased at HIMSS 2018, especially in the areas of supply chain management, security and privacy. We expect block chain to be of particular interest to pharmaceutical manufacturers for patient safety, pharmacovigilance, precision medicine and clinical trial recruitment.

4. **Fast Healthcare Interoperability Resources (FHIR).** FHIR is one of the latest in the HL7 family of standards. It rapidly is underpinning the accelerating movement toward open, standards-based APIs. Increased adoption of FHIR-based APIs is expected this year as EHR vendors and pharmaceutical companies consider how to use innovative APIs to enable communication with patients and partners. FHIR also is becoming key to Internet-based information exchange networks and is being considered for the transport of data for specialty pharmacy enrollment, which is part of efforts

"...interoperability is key to the future of patient-centered health care and the time is now to make that happen."

to automate specialty pharmacy. It is in the background of Apple's new patient data on the iPhone initiative, described above. It also underpins the Da Vinci project, which is described below. In short, FHIR rapidly is becoming a standard of choice for health IT applications.

5. **Government alphabet soup.** Every year, stakeholders gather at HIMSS to ponder how to address various healthIT initiatives from government agencies, which usually are referred to by their acronyms. Two seemed to be on everyone's lips at HIMSS 2018. The first is the meaningful use's (MU) EHR Incentive Program, which CMS promises to revamp in a major way. In her keynote, CMS Administrator Varma said this will be a "complete overhaul" of the MU program for hospitals and the Advancing Care Information performance category of the Quality Payment Program. This got the thumbs up from such stakeholders as HIMSS and the American Hospital Association, which were cautiously optimistic about the possibility of meaningful changes to the MU program.

   The second is the **Trusted Exchange Framework and Common Agreement (TEFCA)**, which is an outgrowth of 21st Century Cures Act requirements. TEFCA is taking an expansive look at interoperability and improving data exchange by health information networks (HINs). Implementation and high-level oversight are being done by the Office of the National Coordinator for Health Information Technology (ONC). The agency issued **draft implementation guidance** in January containing policies, procedures and technical standards the government views as an onramp to interoperability. This is expected to bridge the gap between providers' and patients' information systems and enable interoperability across disparate HINs. The feeling among stakeholders is that TEFCA tries to do too much, too soon. Stay tuned to see how this unfolds. **(Click here for our analysis of TEFCA)**.

6. **Improving prescription decision making and price transparency.** One HIMSS takeaway is a new emphasis on standards use cases to solve specific problems. While FHIR was everywhere as a problem-solver, electronic prior authorization (ePA) and the real-time benefit check (RTBC) were showcased as ways of addressing two long-standing prescribing problems, respectively: improving the prescription decision-making process for medications needing preapprovals and providing better price transparency at the point of prescribing. Both Surescripts and CoverMyMeds exhibited their new solutions for ePA and RTBC. Surescripts noted that its RTBC solution was the result of a collaboration with Epic, Allscripts, Cerner, GE Healthcare, Practice Fusion and Aprima, whose EHRs represent 53% of the US physician base. In pilot tests, participants — which included CVS and Express Scripts — generated 3.75 million transactions in one year and provided patient-specific prescription benefit price data to prescribers in real time. Surescripts' RTBC solution is being **integrated by Cerner into its EHR** — a development announced just before HIMSS.

7. **Interoperability.** Interoperability is another concept that was put front and center at HIMSS18, especially from the government side. Interoperability will be top priority for the Trump administration, according to keynote speeches by Jared Kushner and Seema Varma. Kushner noted that interoperability is key to the future of patient-centered

health care and the time is now to make that happen. Efforts to address interoperability also were underscored by Donald Rucker, head of the ONC, who said ONC will focus on interoperability and related provisions of the 21st Century Cures Act, including information blocking, increased use of APIs and TEFCA (described above). ONC is still relevant, especially in the area of interoperability. It dodged a bullet in the newly passed **Omnibus budget bill** and will maintain its current funding level at least through September. This should give the agency some breathing room to keep fully focused on its various interoperability initiatives. That said, HIMSS 2018 also demonstrated that there is private-sector demand to build to interoperability. There are more and larger data sets and a burgeoning array of tools, such as FHIR and block chain, to connect them. Interoperability still is very fragmented, but we are making progress.

8. **Multistakeholder efforts.** HIMSS 2018 was teeming with multistakeholder groups, all of which aim to facilitate data exchange in one way or another. There were data exchange networks, including the Commonwell Alliance and Sequoia Project. There was the Argonaut Project, a private-sector initiative to expand information sharing among EHRs and other health IT using FHIR. On the consumer side, there was the multisector collaborative, the CARIN Alliance, which is working to advance consumer-directed exchange of health information. Despite their differing makeup and foci, the groups had one thing in common: convening and problem solving on their own, as opposed to letting the government initiate and oversee the initiative. We learned the benefits of doing that years ago, with the creation of the Southeastern Michigan ePrescribing Initiative (SEMI). SEMI helped save stakeholders $119 million in drug costs and $11 million in prevented health care costs. **(Click here for our white paper on the project.)** It's a workable concept that can produce quick — and real — results. But who you pick to run it is critical. As managers of SEMI, we're happy to share other lessons learned and best practices.

9. **Population health.** Population health continues to be a goal in need of solutions and wider user acceptance. Maybe 2018 is the year. The Trump administration clearly is advocating population health, so its efforts could help move the needle in terms of technology and use. Many HIMSS presenters linked new interoperability efforts with population health, such as MyHealthEData. A number of exhibitors showcased practical solutions that would address related issues with existing systems. An example is a presentation by UMass Memorial Healthcare. It centered on UMass development of improvement efforts in the hospital and primary care practices through the creation of practice improvement facilitators, who work with practice staff to implement population health across the 32 EHRs in use in the affiliated practices. They support practice efforts to educate and implement programs to identify patients and have appropriate interventions, especially among patients who are "rising risk" on their way to being the future sickest patients.

10. **Value-based care.** Health care's transition to value-based care was another major theme of HIMSS 2018. It was clear from presentations and new vendor offerings and strategic partnerships that value- based care is beginning to gain more momentum. That is because data sets are more easily accessible and the tools to facilitate their availability and analysis are becoming more sophisticated.

Along those lines, HIMSS 2018 featured presentations on the Da Vinci project. This new private-sector initiative is developing a rapid multistakeholder process using HL7's FHIR standard for addressing value-based care use cases between payers and providers. The project will: 1) identify specific value-based care use cases that are amenable to national solutions using FHIR-based APIs; 2) rapidly develop implementation guides and reference implementations; and 3) field test those materials to validate readiness and efficacy. Co-led by POCP's Jocelyn Keegan, **the Da Vinci project** is being overseen by a multistakeholder group consisting of HL7, payers, providers, health IT vendors, and key government agencies.

See you next year in Orlando! •

3 Part 3: The Da Vinci Project: Helping Payers and Providers Get the Most From Value-Based Care

By Jocelyn Keegan, Senior Consultant

As the health care system transitions to value-based care, stakeholders need new tools to share and analyze data, improve population health and clinical outcomes and cut administrative burdens. Enter the Da Vinci Project, a private-sector initiative that kicked off in late January.

Da Vinci is developing a multistakeholder process to promote and accelerate the use of Health Level 7's (HL7) Fast Healthcare Interoperability Resources (FHIR) standard for the data exchange needed for value-based care delivery. Project participants believe FHIR is uniquely positioned to bridge interoperability gaps across the many disparate systems used today to exchange clinical and administrative data between payers and providers and providers and providers.

As shown in the infographic below, Da Vinci's governance model comprises payers, providers, health information technology vendors, HL7 and key government agencies. The group is focusing on specific value-based care use cases to create reference implementations that may be amenable to national solutions using FHIR-based application program interfaces. The goal is to enable improved patient care outcomes as well as empower better clinical decision making by shifting key information into provider teams' work flow and sharing that information across organizational boundaries to ensure best care and outcomes for patients.

Initial use cases under consideration involve medication reconciliation, coverage requirements discovery, and documentation templates/coverage rules. Other likely use cases include quality measures reporting, laboratory results, value-based care member identification, ADT notifications concerning transitions in care, and electronic health records exchange to support Healthcare Effectiveness Data and Information Set and Medicare Stars ratings.

10 Payers

4 HIT Vendors

1/2 Dozen Providers

3 EHRs

9 Use Cases

Discovery is under way for the initial use cases. Outputs from the project are intentionally public and will be available for implementers, including implementation guides and reference implementations. These will be pilot tested to validate readiness and efficacy. Implementation guides that merit broad-based standardization will be brought into the HL7 standards development process for coordination, co-development and balloting. •

Want to learn more? Please reach out to me, as Da Vinci Project Manager, at **jocelyn.keegan@pocp.com**. *You can also follow the Da Vinci page on HL7's website* **(click here)**.