

Renewed Public & Private Efforts to Increase Access to Patient Data

On May 8, 2018, Change Healthcare, a healthcare technology company, announced that it plans to partner with Adobe and Microsoft to develop a cloud-based tool that can collect, aggregate, and activate consumer data from various healthcare information technology (IT) sources, such as electronic health records (EHRs), registration, scheduling, and billing.¹ Specifically, the tool will bring together three different platforms, including Adobe Experience Cloud, Microsoft Azure, and the Change Healthcare Intelligent Healthcare Network, to streamline the online experiences of patients within a healthcare organization.² The tool will also help organizations gain a competitive advantage within the healthcare industry by assisting with revenue cycle and *patient relationship management* (PRM) initiatives, similar to the way retailers currently engage customers.³ According to Matt Thompson, Adobe executive vice president of field operations, "Patients today expect the same seamless, personalized experiences with healthcare providers they already know from other consumer brands...By collaborating with Microsoft and Change Healthcare, a pioneer in healthcare IT, we'll be able to help transform the way healthcare organizations engage with patients across all channels, from follow-up care coordination and caregiver personalization to cost transparency."4 The partnership between Change Healthcare, Adobe, and Microsoft is just one of the many examples of technology companies attempting to transform EHRs into Comprehensive Health *Records* CHRs⁵ – a step that will increase patient engagement, interoperability, and transparency within the healthcare industry.⁶

In addition to this announced partnership, other tech companies such as *Apple*, *Amazon*, and *Google* have begun their own initiatives to enter the health IT industry.⁷ Apple is working in conjunction with various hospitals and EHR vendors (including *AthenaHealth*, *Cerner*, and *Epic*) to implement *Apple Health Records*, a program that aggregates EHR data and allows patients to view their medical

records on an iPhone application.⁸ Further, Google and Amazon are in the process of developing their own EHR platforms, otherwise known as Google Cloud Healthcare and Amazon Web Services (AWS), respectively.⁹ Such technologies are examples of public application programming interfaces (APIs)¹⁰ - software intermediaries that allow two applications to talk to each other – which have become increasingly reliant on Fast Healthcare Interoperability Resources (FHIR), a new and simple standard for exchanging healthcare data electronically.¹¹ Unlike the current standard for transferring healthcare data (i.e., C-CDA), which can only transfer entire documents, FHIR enables the sharing of specific data fields, such as sex or eye color, making information exchanges more interoperable, more efficient, and faster.¹² Given that these new EHR systems may be viewed as "data repositories on which workflow and other applications can be built,"¹³ the use of public APIs and FHIR standards will likely pave the way for a "true app store approach" to healthcare data,14 subsequently leading to the "deconstruction of *monolithic EHRs*" by forcing existing EHR vendors to provide open access to patients' digital records.¹⁵ As stated by Charles Jaffee, Chief Executive Officer of Health Level Seven International (HL7), the organization that created FHIR, the use of interoperable and public APIs is "a significant step toward enabling patient engagement at a level that we hadn't appreciated in the past."¹⁶

In addition to the technology industry's efforts to facilitate the seamless exchange of healthcare information, the Trump Administration has listed the interoperability of, and access to, patient data as a top administration priority.¹⁷ On March 6, 2018, the *Centers for Medicare and Medicaid Services* (CMS) announced *MyHealthEData*, a new initiative aimed at giving patients control over their healthcare information.¹⁸ This government-wide initiative will be led by the *White House Office of American Innovation* in conjunction with the *Department of Health and Human Services* (HHS),

CMS, the Office of the National Coordinator for Health Information Technology (ONC), the National Institutes of Health (NIH), and the Department of Veterans Affairs (VA), and will serve to allow patients to access their medical history electronically through a device or application.¹⁹ Along with MyHealthEData, CMS also announced the launch of Medicare's Blue Button 2.0, in which Medicare beneficiaries can safely access and share their healthcare information, such as previous prescriptions, treatments, and procedures.²⁰ Both initiatives are an attempt to align with the October 2017 Executive Order to "Promote Healthcare Choice and Competition Across the United States," which mandates the improved access to and quality of data related to healthcare prices and outcomes.²¹ According to Jared Kushner, leader of the White House Office of American Innovation, and Seema Verma, CMS Administrator, closed data systems can "lead to duplicative testing, possibly missed opportunities to improve outcomes and an inability for doctors to coordinate patient care."22 Kushner goes on to state that "unleashing data will unleash innovation" and that it is the Trump Administration's goal to put "more decision making in [the] hands of customers."23

After the successful conversion of physical health data into an electronic format by healthcare

providers, in response to various EHR Incentive Programs, the Trump Administration is now spearheading efforts to make clinical information more interoperable and accessible to consumers.²⁴ At the same time, as noted above, several technology companies have begun initiating their own projects to increase patient engagement with their own medical records. The push for open access of health information through public APIs and FHIR standards presents a direct threat to existing EHR vendors, such as Cerner and Epic, who currently benefit from limiting data access and interoperability.²⁵ However, this threat may be offset by the fact that well-funded tech giants have historically struggled to enter the healthcare industry, suggesting that there may be future challenges in penetrating the market.²⁶ This was the case when Google attempted to create Google *Health*, an open API that was later discontinued after the service failed to gain widespread adoption.²⁷ Nonetheless, the Trump Administration has stated its commitment to continuing its efforts to "create a health care ecosystem that allows and encourages the health care market to tailor its products and services to compete for patients on the basis of value convenience, customization and quality," so that the healthcare delivery system (and consequently, patients) can benefit from greater efficiencies and lower costs.28

- 16 *Ibid.*
- 17 "The Trump Administration's Plan to Put You in Charge of Your Health Information" The White House, March 9, 2018, https://www.whitehouse.gov/articles/trump-administrationsplan-put-charge-health-information/ (Accessed 5/14/18).

18 "Trump Administration Announces MyHealthEData Initiative to Put Patients at the Center of the US Healthcare System" The Centers for Medicare and Medicaid Services, Press Release, March 6, 2018, https://www.cms.gov/Newsroom/MediaReleaseDatabase/Pressreleases/2018-Press-releases-items/2018-03-06.html (Accessed 5/18/18)

22 "Giving patients control of their health information will help give patients control of their health" By Jared Kushner and Seema Verma, recode, March 15, 2018, https://www.recode.net/2018/3/15/17114684/health-care-digitalinformation-jared-kushner-seema-verma-president-trump (Accessed 5/14/18).

^{1 &}quot;Change Healthcare Teams Up with Adobe and Microsoft to Put the 'Consumer' in Healthcare Consumer Engagement" Change Healthcare, Cision PR Newswire, Press Release, May 8, 2018, https://www.prnewswire.com/news-releases/change-healthcareteams-up-with-adobe-and-microsoft-to-put-the-consumer-inhealthcare-consumer-engagement-300644216.html (Accessed 5/14/18).

² Ibid.

³ Ibid.

⁴ Ibid.

^{5 &}quot;Apple Health Records: Where early adopters see the biggest impact so far" By Bernie Monegain, Healthcare IT News, May 11, 2018, http://www.healthcareitnews.com/news/apple-healthrecords-where-early-adopters-see-biggest-impact-so-far (Accessed 5/14/18).

^{6 &}quot;Apple is officially in the EHR business. Now what?" By Rachel Z. Arndt, Modern Healthcare, January 26, 2018, http://www.modernhealthcare.com/article/20180126/NEWS/180 129910 (Accessed 5/14/18).

^{7 &}quot;Apple, IBM, Google hold keys to make EHR data more actionable, Kalorama says" By Tom Sullivan, Healthcare IT News, September 1, 2017, http://www.healthcareitnews.com/news/apple-ibm-google-holdkeys-make-ehr-data-more-actionable-kalorama-says (Accessed 5/14/18).

⁸ Monegain, May 11, 2018.

^{9 &}quot;EHR Adoption, Interoperability Brought Google Back to Healthcare" By Kyle Murphy, PhD, EHR Intelligence, March 6, 2018, https://ehrintelligence.com/news/ehr-adoptioninteroperability-brought-google-back-to-healthcare (Accessed 5/14/18).

¹⁰ Ibid.

Ibid; "FHIR Overview" HL7 International, April 19, 2017, https://www.hl7.org/fhir/overview.html (Accessed 5/18/18).

^{12 &}quot;FHIR and the future of interoperability" By Brian Ahier, Healthcare IT News, January 6, 2015, http://www.healthcareitnews.com/news/fhir-and-futureinteroperability (Accessed 5/18/18).

¹³ Arndt, January 26, 2018.

¹⁴ Ahier, January 6, 2015.

¹⁵ Arndt, January 26, 2018.

¹⁹ *Ibid*.

²⁰ *Ibid.*

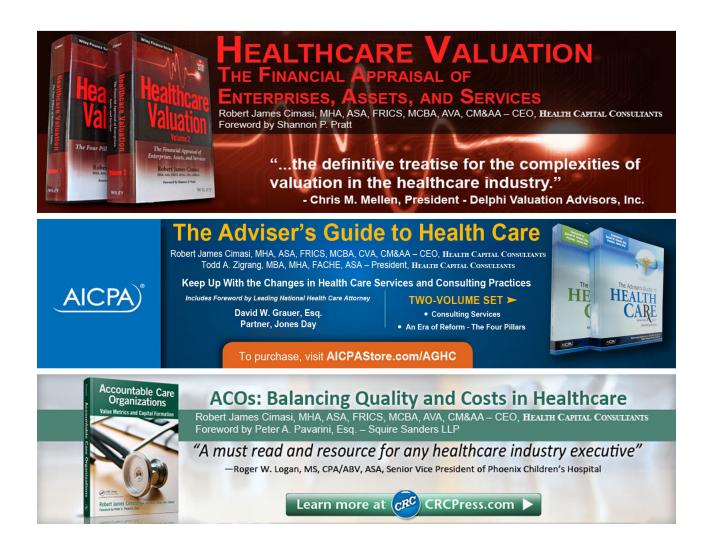
²¹ Ibid; "Presidential Executive Order Promoting Healthcare Choice and Competition Across the United States" By Donald J. Trump, The White House, October 12, 2017, https://www.whitehouse.gov/presidential-actions/presidentialexecutive-order-promoting-healthcare-choice-competitionacross-united-states/ (Accessed 5/18/18).

²³ The White House, March 9, 2018.

²⁴ Centers for Medicare and Medicaid Services, March 6, 2018.

25 See "Black Book: Epic, Cerner, Meditech take top scores in new EHR survey but Amazon and Google pose threat to market" Healthcare IT News, http://www.healthcareitnews.com/news/black-book-epic-cernermeditech-take-top-scores-new-ehr-survey-amazon-and-google-pose-threat (Accessed 5/24/18).

- 26 Monegain, May 11, 2018.
- 27 Arndt, January 26, 2018.
- 28 Kushner and Verma, March 15, 2018.





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