EHR interoperability: We're closing in on a signature moment

No, interoperability will not be completely solved – but an architectural feat that's about to happen will ignite FHIR and API innovation and bring bright new developer minds to healthcare.

By Tom Sullivan | July 25, 2018 | 12:22 PM

Get ready for this: Interoperability is on the cusp of a breakthrough akin to AT&T customers being able to pick up their phones and call Verizon subscribers. That's a convenience that's long been taken for granted, of course. So why has it taken so long for clinicians to easily access patient data in competing EHRs.

We're almost there, people – ready for a significant step in the healthcare system's digital transformation journey.

Carequality and CommonWell are poised to go fully live with a health information exchange encompassing all major EHR vendors, as well as subscribing hospitals. And when they do, some 80 percent of doctors will be able to share patient data among competing EHRs, said Micky Tripathi, who is on the board of both CommonWell and The [Sequoia Project](), which oversees Carequality.

That critical mass is invigorating. But even more important is how this new phase will change current thinking about the future of FHIR and open APIs, and lay the foundation for really using data in a meaningful way. That's the exciting part.

"This will be a signature moment in nationwide interoperability," said Tripathi, who is also CEO of the Massachusetts eHealth Collaborative and a veteran of interoperability working groups at the Office of the National Coordinator for Health IT.

"I'm very sanguine about where interoperability is and where it's headed," he said. "You can decide whether that means I'm biased or bullish, but I think it's more the latter."

Tripathi is not the only one.

First, a quick bit of background

In December 2016, [Carequality and CommonWell revealed plans to work together advancing connectivity and health information exchange](). That collaboration would see CommonWell implement Carequality, so its members can query each other, while Carequality would develop a version of CommonWell's record locator service that its members could use to look up patients across the network.

"Connecting those is actually happening," said Tripathi. "There's been a lot of testing and the hope is that it should go full-live by the end of the summer. The biggest breakthrough that will happen when these get connected is providers on one side of that wall will be able to connect with providers on the other side of that wall."

"We've achieved an architectural feat here. And it's up to the market to fill in those gaps while we work on APIs and FHIR."

— Micky Tripathi, board member on CommonWell and The Sequoia Project

Specifically, a member hospital in either Carequality or CommonWell using, for instance, a Cerne EHR will be able to run queries against another participating health system that houses patient data in Epic's system.

But it's not just about Epic and Cerner. Any hospital using a member EHR vendor will be able to swap data with any other member vendor.

"This is a huge deal as it allows sharing of data between Epic, Cerner and athenahealth users which is most of the EHR market," said Niam Yaraghi, a fellow at Brookings Institution and Assistant Professor of Operations and Information Management at the University of Connecticut's School of Business. "And there are many other partners which make this collaboration even better."

Meditech joined the party in June, for example, when it deployed CommonWell interoperability services ([something it had first announced this past summer](#)) and Ohio's Alliance Community Hospital became the first to tap Argonaut Project's FHIR specification for exchanging documents.

CCDs are not interoperability's destination

But wait, wait, hold on – it's time to put all this in perspective. Lest anyone start thinking that interoperability will be solved before Labor Day, it won't. Rather, what will develop is a basic use case: the exchange of Continuity of Care Documents.

Now, that won't mean a California clinician can essentially Google a South Dakota specialist's record about an individual patient to find out a piece of information as granular as medication allergies. Doctors, instead, will get the entire record in a data dump, and a less-than-perfect one at that.

But CommonWell, Carequality and participating EHR makers, taken together, compose enough of the providers in the country that, as we have seen with digital transformation in other industries, once these sorts of efforts hit critical mass the movement becomes something of a foregone conclusion and the laggards will inevitably come along, too, albeit at their own pace.

Carequality and CommonWell's collaboration is not a simple matter of flipping a switch. Rather, unforeseen technical glitches are bound to arise as this infrastructure expands, and it will take time to perfect the health information exchange arrangement.

Yaraghi said technical problems are bound to present themselves; Tripathi said it could take two years or more to completely iron them out.

"We've achieved an architectural feat here," Tripathi said. "And it's up the market to fill in those gaps while we work on APIs and FHIR."

FHIR+APIs = apps way cooler than XML

Health system CIOs, innovators and tech vendors take note: That architecture is right where things get downright interesting.

"This will both free up a lot of resources and also create opportunities to really use the data in a meaningful way," Yaraghi said. "It is exciting."

And it comes at a time when many people in the industry are saying that healthcare needs to reimagine innovation.

"An API-first strategy is a key component of modern system architectures," said John Supra, vice president of solutions and services at the Care Coordination Institute. "That has the potential to both enable and accelerate innovation."

Supra's colleague Shrujan Amin agreed.

"Healthcare needs to focus on fast and easy-to-implement approaches for data sharing and access, through the use of open standards, platforms, and APIs," said Amin, a data scientist at the Care Coordination Institute. "Unlike other industries, healthcare has been plagued with siloed systems, often designed for a single purpose where interoperability success was measured by importing or exporting a file nightly."

Indeed, when the focus transitions from a 1980's healthcare-specific paradigm to a RESTful API, the health industry becomes a promised land for the next generation of bright young developer minds.

"You're not going to get a new grad coming out of MIT who says, 'Yeah, let's do something with XML.' They'll just go get a job with Facebook," Tripathi said. "But FHIR enables the creation of apps and if I have more people coming in to create cool software that will be targeted at diabetics or asthmatics or diabetics with asthma — you can really see how an ecosystem will start to flourish."

Whether the exchange between Carequality and CommonWell goes live this summer or for some reason gets pushed back a bit is beside the point: After lots of work, we are closing in on a signature moment for interoperability that will be here sooner rather than later.

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