

Is Creating an App Culture the Key to EHR Interoperability?

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Nationwide **interoperability** is at the forefront of the current dialogue about health IT infrastructure across the United States.

The **Office of the National Coordinator for Health Information Technology** (ONC) recently unveiled the **first iteration of its long-term vision** for enabling shared nationwide interoperability within ten years. Last week, the plan week **drew criticism** from members of Congress about where exactly the \$35 billion in funding from the Health Information Technology



for Clinical and Economic Health (HITECH) Act went.

While the debate among members of the federal government rolls on, the private sector is moving forward with its own plans. The most recent comes by way of the **Healthcare Services Platform Consortium (HSPC)**, which strives to solve the interoperability problem in the healthcare industry by creating an environment and culture to support the development of medical applications..

In a one-on-one interview with *EHRIntelligence.com*, Intermountain Healthcare CMIO and HSPC Board Chair Stan Huff, MD, provided details about the consortium's efforts to enable the EHR interoperability of medical applications through the use of an application programming interface, Substitutable Medical Apps & Reusable Technology (SMART), and use of HL7 standards and specifications, Fast Healthcare Interoperability Resources (FHIR).

As Huff notes, the creation a medical apps ecosystem would enable widespread interoperability and tremendous scalability for innovation health IT solutions.

Editor's note: For more on HSPC's approach to EHR interoperability, check out our coverage on [HealthTInteroperability.com](#).

EHRIntelligence.com: What is the status currently of HSPC? What kind of work is underway?

Stan Huff: Right now we're working on getting the business set up. We finalized membership agreements and we have now received actual membership dues for benefactor members from Intermountain Healthcare. Other money is currently on the way. From a technical point of view, we're working on getting a development sandbox set up so that people can have a place to come and be able to develop either services or applications against the services that are compliant with the Healthcare Services Platform Consortium specifications.

EHRIntelligence.com: What is technical approach and why is it significant?

SH: The technical approach that we have taken with HSPC is that our initial strategy is using the SMART on FHIR approach as our way of integrating with and interacting to store and retrieve data from EHRs. Much of the technical work, especially around the FHIR services, is a specification of FHIR profiles that get you to true interoperability around those services.

One thing that needs to happen to get to true interoperability is to specialize or create profiles on those objects that take them from being more or a less an abstract class of things, like observation, and specialize it so that by adding attributes

and by extension and constraint turning it into a laboratory observation or even more specifically a quantitative lab observation.



EHRI.com: How does the SMART on FHIR mesh with Intermountain's own approach:

SH: For a long time, we created our own healthcare information systems, and a key part of that has been the development of advanced decision support modules as well as other kinds of useful applications. We have a 150 of those advanced clinical **decision support applications** depending on how you count. We realized as an organization that there is an opportunity to do 5,000 things and we have to do that many if we are going to improve the quality and cost of care we provide. The things we have done are high volume that are the obvious low-hanging fruit areas and we need to move away from rules that just apply to common infections, diabetes, and heart attacks to heart failure, parathyroid disease, and the next thousand diseases that also need advanced clinical decision support but we're not doing anything for right now.

For us to get to a point where we can actually apply clinical decision support at the level of one to two thousand things, we have to change the paradigm. It can't be a situation where we are just trying to create that knowledge and those executable programs within Intermountain Healthcare. We have to be a part of a community that includes Regenstrief, Mayo Clinic, Kaiser Permanente, Columbia Presbyterian, Vanderbilt — I could go down the list — and is creating that kind of knowledge in an executable form so that it is directly shareable amongst the institutions. I don't mean that that would happen without money changing hands. Whether we buy them, share them or barter and trade the ones we have and the ones that others have, we have to get into a position where we can share rather than having to recreate those applications at our site.

EHRI.com: How do the different members of HSPC stand to benefit of this approach to interoperability:

SH: We want to make more applications available to everyone and if we can do that in a way that that application actually shareable — that exact same application can run as part of Epic, Cerner, **Allscripts**, athenahealth, etc. — then it's huge benefit. It meets an unmet need but above and beyond that you have created an app store-like environment where the motivation for people to create new and useful applications and you have created a marketplace that doesn't depend on any single vendor but is actually vendor independent. It has the potential to dramatically change the quality and cost of software that would be available to healthcare enterprises.



Some of the motivation for Cerner, Epic, and others to participate in this has been their realization that there's a large unmet need for applications that they're not sure how they would ever fill. You talk to the people who have the systems. For the most part they say it is doing what they said it was — we can admit patients, take care of patients, document, place orders, qualify for incentive money for **meaningful use** — but pretty much everybody has a list of like-to-have's.

EHRI.com: What goals has HSCP set for itself moving forward?

SH: My near-term goal is to get some of these standards-based applications up and being used at scale in a production system so that it's not demonstration anymore but actual clinical use. We're in a situation where within three to six months we should have some of these standards-based applications running in production at Intermountain Healthcare accessible to Cerner, which is our current partner for EHR. And then we want to expand and obviously have that same sort of production use of these services at other institutions so that we can verify that this strategy is really going to work.

In the real near term, we're all heads-down creating applications and services to support demonstrations at HIMSS. Even though that is very important for getting the word out to people about what we're doing, the more substantial milestone would be production use of these services in an actual clinical setting. Right now, much of our attention is focused on HIMSS because we're going to do some demonstrations there to show software that is working across Cerner, Epic, and some smaller companies as well.