Dr. Leanne Field Moderates SXSWi Panel on Improving Physician’s Understanding of Patients

Dr. Leanne Field, director, Health Informatics and Health IT at The University of Texas at Austin moderated a panel of experts at the 2016 SXSW Interactive Conference addressing the topic of Improving Physician’s Understanding of Patients. Dr. Field provided opening remarks followed by presentations from: Ruy Carrasco, M.D., Pediatric Rheumatology, Seton Healthcare Family, David McCallie Jr., M.D., senior vice president, Medical Informatics, Cerner Corporation, and Brian Vodicka, student entrepreneur, Computer Science and Mathematics, The University of Texas at Austin.

Panelists discussed several topics associated with improving physician’s understanding of patients. These included the importance of clinicians focusing on the patient’s story in the diagnostic process; an overview of Fast Healthcare Interoperability Resources (FHIR) a next generation standards framework of modular components designed to facilitate interoperability of health data; and a presentation from the leader of the winning team at a UT Austin Health App Design Challenge that developed a FHIR-compliant application.

Dr. Leanne Field, Ruy Carrasco, M.D., David McCallie Jr., M.D., Mr. Brian Vodicka

Dr. Field provided an overview of the Center for Medicare and Medicaid Services’ (CMS) Goals for Meaningful Use noting that we are now in Stage 2: Exchange of health data to improve care coordination.
In 2016, while we are on the road to really improving healthcare patient outcomes we find ourselves facing challenges due to healthcare data existing on many islands each using proprietary technologies to store and manage data.
From an interoperability standpoint, we recognize that improving the ability of the physician to understand the patient’s story while also improving the experience of the consumer as he/she moves between these islands will require data to flow seamlessly everywhere they are available.

This is both the problem and the challenge—there is a gap between where we are currently and where physicians would like to be in the future and they want the future to be now.

Recently there has been promising movement in this area with Health and Human Services
(HHS) Secretary Dr. Sylvia Burwell speaking at the HIMSS meeting last month in Las Vegas making a strong commitment to interoperability stating that “unlocking data is a key part of our efforts to transform our healthcare system into one that works better for all Americans.” Dr. Burwell issued a roadmap to move forward in which multiple organizations have now agreed to implement these three core commitments: consumer access, no information blocking and standards. This new commitment is supported by key participating organizations including 90 percent of vendors providing hospital EHRs nationwide; the top five large, private health systems in the nation including Ascension Health; and leading consumer, provider and technology societies.

Reinforcing this commitment at the HIMSS meeting was Dr. Karen DeSalvo, national Coordinator for Health IT stating that “we do feel that the manifestation of these commitments is a world in which there are apps—FHIR-based apps—that are platform-agnostic so providers can push or pull information in a way that gives users a new kind of interface.”

Given that UT Austin’s motto is What Starts Here Changes The World the university was a little ahead of these announcements over the Valentines’ weekend with the Health App Design Challenge on the UT Austin Campus. Here UT Austin students were challenged to close the information gap by designing FHIR-compliant applications to help physicians better understand the “patient’s story.” This required apps that closed the gap intuitively, quickly, including more than the clinical data in the EHR, and provided information access for physicians anytime and anywhere.

After Dr. Field’s overview each panelist spoke on their respective topics.
Dr. Ruy Carrasco—Understanding the Patient’s/Person’s Story: Why Is It Important

Dr. Carrasco has multiple roles in his position as a Pediatric Rheumatologist at Dell Children’s Medical Center, which is part of Seton and, therefore part of Ascension Health. He sees patients about four days each week and is involved in clinical trials, currently with biologics, and serves as the physician informaticist for the Seton Healthcare Family for the Clinical Enterprise or the CMIO for the physicians. Dr. Carrasco prefers to slightly alter the topic of his discussion from the “Patients Story” to the “Person’s Story” because in his opinion everyone has either been a patient, will be a patient, or knows someone who’s currently a patient. For example, when we call someone a patient they become “them” which is really “us,” and that’s why Dr. Carrasco prefers to call it a “person story” because as physicians he believes that’s who we are really trying to get the story from.

Dr. Carrasco shared the story of his upbringing on a farm and early experience with two physicians (he likened them to magicians) who had the uncanny ability to accurately diagnose patient’s ailments with a minimal number of questions (three to four sentences only) or as few as four adjectives obtained from the patients with which they could figure out the story. 98 to 99 percent of the time they could figure out the story that quickly. They were the reason Dr. Carrasco decided to become a Pediatric Rheumatologist and he learned the real “magic” in understanding the patient or person’s story wasn’t magic but rather the relationship you had with each patient/person. Fourteen years later Dr. Carrasco has figured out the “magic” is really taking the time to listen to the person to figure out their story.

Dr. Carrasco asked the audience what percentage of the time a physician can figure out what the patient has by using that patient’s anecdotal history (also including an exam). The answer is 8 or more times out of 10 just by listening to the patient (in addition to the two minutes the physician actually gives the patient) you can actually figure out what they have. As a Rheumatologist Dr. Carrasco still tends to order a lot of lab work but says listening is key and in the old days for his mentors this involved writing it down on a piece of paper. This is no longer the case. Now there is a whole host of information including numbers from the set of labs that were ordered, figures presented or drawings on the radiology films. All of this must be pieced together including the derived data from all of those original pieces of information.
Dr. Carrasco related an experience where a colleague contacted him regarding a patient who had grown out of Pediatric Rheumatology. The colleague complained that he had been sent over four thousand pages of information and wanted to know where he should begin? Dr. Carrasco’s response was to begin at the beginning with a thumbnail description of the patient’s condition that he would provide backed up by the detailed 4,000 pages of information. The most important part is the narrative provided by the patient/person and the difficulties that physicians have experienced going from paper to electronic data.

Part of the magic that Dr. Carrasco’s mentors had was the ability to have that connection with their patients because it was one thing to figure out what patients had and quite another putting it together using all the various types of information. We’ve gone from the paper world to electronic information and now to all these islands where the information is spread apart and its really difficult to put the information together in a holistic fashion. For example, assimilating Information from devices such as a fitbit and those 4,000 pages of information the patient brings with them. This is where the disconnect is potentially made worse because the story that a person tells is often very different from the story the physicians hear. The idea is that as we get more data, information, and knowledge about patients we have a better understanding and context about the patient’s story. All of this additional information is of course intended to enable better decision-making.
Limiting factors that impact getting the complete story include time constraints, new data that patients may provide, language issues, the patient-specific context, and making sure that patients understand a new treatment or medication that may add to the complexity of the patient experience. It’s difficult to truly understand the patient story given all these variables.

Many physicians have been trained on something called the “SOAP” note or an acronym for the process of working with patients to determine their illness. This includes the Subjective, what the patient is telling us, the Objective, what we actually find on their exams and lab work, and
the Assessment, that should include events-based medicine and precision medicine but may be lacking all of the relevant information, and finally the Plan that is created based on all the previous items.

Traditional problems include lots of information in disparate locations and lots of noise, or unimportant information. The task is to get all the data, get a sense of what’s going on from this information, create a more accurate story of that person, and hopefully optimize the user experience, for both the provider and most importantly for the patient who is really a person.

Dr. David McCallie—FHIR- How We Got Here and Where Are We Going?

Cerner is one of the larger companies that makes electronic medical records systems such as the one Dr. Carrasco and others use at Seton and they sponsored the app challenge to try address some of these questions about how to do a better job of capturing and telling the patient’s story. Dr. McCallie spoke about what it means to have an app challenge in this era of electronic healthcare records. This is a new thought and it’s important to explore what led us to the point where we could have an app challenge and where this will go in the future. An app is something that plugs into a platform and a platform is something that exposes some standards that app developers can create to so there is reasonable confidence that the app will plug-in and run. This is a new thing in healthcare as healthcare software products in the past were not built as platforms but rather as proprietary products. You bought it, installed it, and ran it, taking what the vendor gave you and that’s the way it was.

This is now changing with the concept of open platforms so that you can now think of the electronic health record not as a product, but as a platform taking care of the regulatory compliance that is mandated by the government and serving as the legal medical record for the practitioners using the electronic record. And the apps that are built plug-in and extend the
functionality to take that platform into areas the vendor didn’t develop themselves, or hadn’t thought of yet, or didn’t do a good job of developing.

Outside of healthcare, like everything else going on at SXSW, people understand this, it has transformed the rest of information technology but it really hasn’t had an impact of healthcare so far. Dr. McCallie states there are two standards now that allow the vendors to create these open platforms—HL7 FHIR and SMART. These two technologies are the ones you should pay attention to if you are interested in becoming an app developer and plugging into these emerging EHR Platforms. Dr. McCallie added that Brian Vodicka would discuss how that might function with some of the work he did to win the competition in his upcoming presentation.
Dr. McCallie stated that we are now at a point where we can think of EHRs as platforms, which is quite a sea change in the healthcare industry. This has happened in just the last two years where a government panel was convened and made recommendations in which vendors should be required to deploy application programming interfaces (APIs) in healthcare. Believe it or not this had never happened previously. This was driven by several groups including the JASON Report Task Force with Dr. McCallie as co-chair, as well as the Argonaut Project, a group of vendors working together to advance industry adoption of modern, open interoperability standards. This has led to a release in 2015 of a requirement that all EHR products expose an API. This would have been unbelievable in the vendor community as little as five years ago and now everyone is hard at work doing it. This is a case where the government’s regulatory apparatus has in fact changed the behavior of the industry.

The requirement and regulation for EHR APIs that happened in 2015 doesn’t specifically require these two standards so far, but most industry participants believe this will happen. The vast majority of vendors who are building these platforms according to standards are in fact using HL7 FHIR and SMART. To describe both standards, HL7 FHIR is probably the more important and it’s a data access API and a ReSTful API that’s based on Internet standards (HTTP, etc.), so unlike previous healthcare standards that were created from scratch, HL7 FHIR leverages existing technologies so that developers that don’t know anything about healthcare can become productive very quickly. SMART is a specification that allows you to embed a webpage into the EHR so that you can have a positive user experience on top of the data access you get from HL7 FHIR. Below is a list of some of the data domains that HL7 FHIR makes available to the developer, essentially the information that is expected to be in a medical record.
SMART is basically a web app that is coupled with some security standards, in particular OAuth2/OIDC, that allows the developer to be guaranteed that the web app plugs into the EHR and works with the security clearance of the current user and doesn’t have over or under granted access rights.

What can be done with SMART and FHIR has been demonstrated at the last three HIMSS conferences, the major industry event for the healthcare IT industry. These events are attended by over 40,000 people who are devoted to healthcare who get together to share products and knowledge. Cerner coordinated and demonstrated the ability to take 12 different apps developed using HL7 FHIR and SMART and show them being plugged into the different vendors across the tradeshow floor. This was a first in publically demonstrating software interoperability in the healthcare IT industry.
Examples of apps that have made it past the pilot stage and will be deployed by vendors include:

- Pediatric growth chart developed at Boston Children’s Hospital to be deployed by Cerner. The app includes an innovative view that’s structured to communicate with the family and parents using icons versus curves, numbers and percentiles that are not meaningful to the targeted audience.

- An app developed by Intermountain focused on the first 36 hours of a newborn’s life to help manage excess Bilirubin by putting them under photo therapy.

- An app developed at Geisinger and focused on Rheumatology to allow patients to document their exact symptoms real time that will be used by doctors in the clinic avoiding the need to rely on the patient’s memory.

As evidence that these new apps will take off is the fact that vendors such as those in the Argonaut Project are working together in an open-source method fleshing out the APIs and testing their products against each other. This is a good sign that the industry is headed in the right direction.
Smart apps are an important starting point for integration of external things into the EHR. There’s more to come and an especially important one is CDS Hooks that allows for pluggable decision support including the ability to actually influence the decision making of the clinicians by the use of plugins. Dr. McCallie believes this may turn out to be the “killer app” for this space in the long run. In the future the EHR will be a true platform that can both send data to the cloud and can invoke services from the cloud built into the work flow of the EHR. The clinician using the EHR will not be able to tell if it was build by a vendor or if it came from a third-party and it was plugged in.
Cerner and others have set up open developer websites where developers experimenting with apps can go for information: Cerner Open Developer Site: [http://code.cerner.com](http://code.cerner.com).

At Cerner, the company will work with developers to gauge the business potential for specific apps. Some will be open-source and free, others may go through resellers, and finally some may be strategic parts of Cerner products through joint agreements with the developers. This area is evolving currently at Cerner and throughout the industry.

This is considered a new phase of business at Cerner. Future issues include whether the industry agrees to use these APIs consistently. The FIHR specification is quite open and it could be used in ways that could be incompatible. There is a technique called profiling that allows users to determine exactly how it will be used. If the vendors can work together and agree on standard profiles this should be a success. If the vendors become fragmented and the profiles diverge from each other it may limit some of the applicability. The FHIR APIs can become very complex and could be an obstacle limiting acceptance. There are legal and security issues that need to be worked out with regards to provider-facing apps under HIPAA. And finally the overall complexity of introducing dozens of different apps written by different teams using different user interface standards deployed into stable EHRs may create safety issues that could inhibit the development of apps. These issues will all have to be worked out in the next few years.

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**Dr. Leanne Field—A FIHR-Based Healthcare App Design Challenge**

Dr. Field then provided an overview of the health app design challenge that took place at UT Austin over the Valentine’s Day weekend. This was a first in that the UT Austin Computer Science Department had never had a healthcare related hack-a-thon or design challenge and it was exciting to bring this activity to the UT Austin campus and spark the imaginations of computer science students to get involved in healthcare.
Sponsors included: UT Austin’s Health Informatics and Health IT program and the Computer Science Department, SXSW Interactive was very supportive in donating five tickets to Interactive and the Film Festival for the winning team and that was enough incentive to lure the computer science students to participate. Additional support came from the Seton Healthcare Family, Cerner, and Jericho Systems.

The core planning team consisted of Michael Minks and Thomas Erlinger of the Seton Healthcare Family, Jim Karolewicz at Cerner Corporation, Dana Abramovitz and Hugh Forest at SXSW Interactive, and the UT Austin team members Katie Banks in the Computer Science Department and Dr. Leanne Field and Nisha Kumaraswamy at UT Austin’s Health Informatics and Health IT Program.

Students had all-weekend support including technical support from Cerner and Athenahealth as well as clinical support from Seton Healthcare Family.

This was an 18-hour weekend Code-a-Thon for eight interdisciplinary teams of five students. They were provided a clinical introduction to the problem, technical presentations about FHIR, and technical and clinical support all weekend.

Students chose from one of three case studies, patient’s stories they saw in advance. These stories had extra noise put in to make them more realistic. Their challenge was to design an app using HL-7 FHIR API standards pulling data from a Cerner platform that did include noise. 15 hours later they presented the app features to participants with demonstrations to judges that included two physicians – Drs. Thomas Erlinger and Ruy Carrasco and one industry expert – Mr. Jim Karolewicz.
The apps were judged on four criteria:

1. How well did the team capture the entirety of the patient story (including clinical, social, psychological, and risks).

2. How easily could the reviewing clinician understand the patient’s story based on the app design?

3. What was the clinician’s user experience, i.e., was the application easy to navigate and were data organized in a way that facilitated the clinician’s thought processes?

4. How well did the team present the design?

The third place winner was a team called Kuhaahu. They produced a scalable web app to provide a holistic patient story for primary care providers. Included in the app was a timeline feature that was integrated with social and medical history information in a well-designed, unique way.

The second place winner was a team called MediSync. They implemented basic ideas from telemedicine by integrating a video of actual patients into the app. They also brought a futuristic perspective into the app design. Finally, they prioritized clinical data with a patient timeline and added a fuzzy search capability making it easy for providers to visualize.
Mr. Brian Vodicka—CARE: An APP for Physicians to Better Understand the Patient’s Story

CARE is an app that helps physicians understand the patient’s story by giving them the most relevant information for a specific person in a specific office. This is done by using predictive analytics to understand what the patient might be at risk for or what their diagnosis might be for a specific visit.

CARE was developed by a team of five students at the UT Healthcare App Design Challenge. Brian Vodicka was the lead developer and data scientist for CARE, Enrique Sotomayer was an IOS developer, Esaias Tong was a pre-med student who helped out by understanding what physicians think about the app and how they might interact with it, and Liu Yanxian and Daniel Santa Maria are both ECE (Electrical and Computer Engineering) students who helped out on the backend.

At the beginning of the Healthcare App Challenge Dr. Erlinger described the problem of physicians having an incredible amount of data on patients including their medical history and all their prescriptions and medications. However, actually gleaning actionable insights from this data is very challenging especially in the context of a 10 to 15-minute office visit. Some patients such as engineers will present physicians with charts and graphs supporting their diagnosis of what they think their ailment might be. Physicians have to optimize the time spent with each patient. The goal was to design an app that would use analytics and cloud computing to assess all this data, pull it from the FHIR API, pull their medical histories, pull their social history and family history, and give the doctor something they could look at that so they could understand the physician’s story really quickly and make sure they are asking the correct, pertinent questions for this office visit.
Dr. Erlinger also described another problem, which is that physicians often don’t know who’s coming into the office in a given day. The idea was to create a physicians’ portal that could provide doctors with the ability to review upcoming appointments for the day or the next day, allowing them to prepare in advance. So the CARE Team developed an app called care ios that allowed physicians to see upcoming patients to allow them to prepare for what’s coming up and get relevant information prior to the patient’s visits, organized in chronological order. They can also see what’s happening with patients post office visits. This allows them to monitor patients as they go through the medical process.
The most powerful attribute of care ios is its predictive analytics capabilities. Relevant information for the upcoming visit can be pulled from the FHIR API such as a patient’s medical, social and family histories as well as genetic information, and this information is then sent to the physician’s portal suggesting that the patient is predisposed to a set of specific risks and the doctor may want to steer the conversation toward suggestions for treatment consistent with these risks.

The diagnosis prediction engine was created by the CARE Team in a 24-hour period in a hack-a-thon. However, Brian Vodicka had experience working on this diagnosis prediction engine with two researchers who earned their Ph.D.s from UT Austin. These researchers have backgrounds in machine learning and predicative data analytics and now work at a company called Accordion Health that focuses on the use of big data in healthcare.

As an overview of how it works, you start with the patient’s healthcare data stored in the cloud. The process of determining what a patient might be at risk for involves looking at their medical and social histories and identifying 10-15 patients with their data stored in the cloud with similar medical and social histories, on similar timelines, and using similar drug treatments. Predictions are based on the probability that if these 10-15 patients all had similar diagnostic outcomes then the patient under analysis would follow the same trajectory and be at greater risk for a given disease such as diabetes. The patient can be advised to make lifestyle changes or take the necessary precautions that could improve their health. It’s important to remember that pulling data from the FHIR API and doing the analytics on it is not just for the patient/doctor visit setting. It can be used by a variety of professionals such as coders, physician groups, or in any situation where the goal is assist the physician in understanding their patients better.
Audience Q&A

At the conclusion of the presentations audience members posed several questions for the panel. A representative from a company called Interaxon that makes a brain sensing headband focused on meditation for reducing stress, depression and anxiety. The representative said they have a lot of interest from behavioral health professionals and wondered what they could do as a device team to not add to the torrent of information provided to the physician but instead provide useful data and follow best practices?

Dr. McCallie responded that this is referred to in the industry as patient-generated data and it’s increasingly recognized as a missing piece of the record today. This includes a growing number of data inputs from wearables such as Fitbit, the Apple Watch, and other devices. However, this can easily add to the data overload received by the physician and in some cases this could be irrelevant data. The current situation is the industry is trying to figure what to do with this data as its unclear how to best use it so far. The place to start is to think about data you know you need to address a specific issue the patient has.

For example, for a patient with insomnia one reaction is to prescribe a sleeping medication and perhaps a better reaction might be to prescribe an app that captures the patient’s sleep patterns and maybe some brain activity. When the patient returns they can be assessed for improvement based on the proposed interventions. So in this case all of the patient-generated data is in the interest of trying to address a particular need of the patient. A Fitbit by itself may not be terribly interesting to the average physician but if you’re dealing with a total hip replacement patient and documentation is needed to ascertain if the patient is walking enough to avoid letting the joint freeze up the Fitbit data becomes incredibly important. This is all contextually dependent on what you need to know.

The Interaxon representative asked about the issues of regulated and non-regulated devices. Dr. McCallie responded that the regulatory issues for these devices are very complex and have to do with APIs and apps used by the physician being HIPPA regulated devices that require a business associate agreement and impacts the device manufacturer as well. If the device is under the control of the patient none of these rules apply. However, Congress is looking at this now and may enact future legislation that exerts greater control over consumer healthcare devices, its currently an unsettled space.

Dr. Carrasco added that he has patients that are now requesting that he correlate Fitbit data with a number of other tests such as sleep study data that the physician would typically use over a period of a month or so. Physicians who think in patterns need to be able to fit this new data into their traditional patterns. Not all relevant information is presented in text book form and we need to acknowledge and act on the fact that real life is different.

Tom Lynn, a healthcare entrepreneur from Nashville, asked Dr. McCallie about the future of patient engagement-facing apps and the individual EHR app store. EHRs are a very fragmented space with 1,200 or so EHRs available currently. Tom doesn’t want to sign a hundred or more
Dr. McCallie responded that the transition to this being a feasibility may occur by leveraging the APIs in the patient portal so that you as a consumer can pick your app or pick your personal health record, point it to the portal, authenticate with your password and authorize the PHR or the app to download the data. This allows you to do with it what you want including aggregating it with the other data from your other providers. This is probably the first thing that will happen and there is a project underway that was just announced called Sync for Science that will get a lot of attention in the coming months as the White House is behind it and the ONC is coordinating. This will allow consumers to donate their data to the Precision Medicine Initiative. The idea is that you will download an app, point it to your portal, it will pull your record, you will sign your consent, your data will be anonymized and it can be used to correlate with genomic data with the big one million-member Precision Medicine Initiative. Regardless of personal thoughts about the value of the Precision Medicine Initiative, there will be real value in creating those APIs and the ability for apps to pull those records out and do with it what you want. Dr. McCallie believes this is the route to letting users aggregate their own records.

On a related topic, Dr. Carrasco commented that a problem that Seton/Ascension is having is the issue of nomenclature used for signs, symptoms, diseases or syndromes. There is a huge problem with the use of inconsistent terminology in their organization. This is compounded by the fact that there are over 5,000 pieces of software are used throughout the Ascension System. Dr. Carrasco believes there is a need to acquire standard language perhaps with the help of the ONC or another organization to ensure that physicians across the country are consistent in their use of terminology.

An audience member who identified herself as a digital health entrepreneur and e–patient, commented that when attending conferences like HIMMS we tend to focus on problems in healthcare and forget that this is an exciting time. She further commented that almost 50,000 attendees from all over the world including providers, patients, doctors and other entrepreneurs came with different questions but with a common focus on the patient. Her question was now that doctors are ready to involve patients in the conversation do we take the time on the federal level and in larger organizations like Cerner, Ascension, and McKesson, etc., to educate the public on the importance of taking charge of one’s own health?

Dr. Carrasco responded that he trained at Cincinnati Children’s Hospital where they required the healthcare team start at the beginning and focus on the patients. When he was volunteered as a Fellow-in-Training he was required every three months for 3-4 hours at night to meet with patients to figure out how to reconfigure two hospital floors that were completely stripped of their infrastructure and furnishings to be better configured for the benefit of patients. This included determining the best locations for computers, patient check-in, where
This type of focus on the patient has been a priority in some healthcare organizations for a long time while others are just now adopting this practice. Patient-focused processes are important and always evolving. Dr. Carrasco is currently working in an EHR group with a goal of optimization. He believes unfortunately that the optimization under consideration is for the benefit of the physicians and not the patients. Dr. Carrasco believes that places like Cincinnati Children’s Hospital are important reference points for all healthcare organizations as they focus intently on what’s best for the patient.

The final question was from Zac Jiwa, CEO of an Austin-based company called MI7, a provider of a universal APIs for digital health companies connecting to EHRs. Zac’s question was for Dr. McCallie and had to do with the timeline for FHIR, as it may be defined by 2017, that will be pervasive across implementations. Mr. Jiwa asked “what is the plan for a company such as Cerner to distribute FHIR across all the health systems that have already adopted Cerner as their EHR?”

Dr. McCallie responded that he is reasonably confident in the future success of FHIR because it’s the first time there’s really been an option since in the past there was no API standard available. If a vendor wanted to use an API they had to create it, there was no other choice. HL7s previous attempts at creating standards were not API-based, they were message-passing standards and they were not very well done. People implemented them because they had to, not because they solved useful problems. FHIR is new and put together by some very smart people who understand what it takes to build a good API. So for the first time there is an accepted standard that is good enough to solve the problem.

Second, the vendors are very sensitive to the complaint that they have not done enough for interoperability. They know its much better to build a multi-purpose API that can then solve a variety of interoperability patterns than it is to go build custom, bespoke interfaces from scratch every time which is the way it was done in the past. Its in the vendor’s self interest to recognize that if there are a good set of robust building blocks like FHIR then it will be a lot easier to address emerging interface challenges in the future. These are all good reasons to be optimistic. The thing that scares Dr. McCallie is what he mentioned briefly in one of his caution slides about the profiles. As Dr. Carrasco mentioned previously there is the problem of getting everyone to agree on nomenclature in medicine and even when there is agreement its hard to get doctors to use the same subset of that nomenclature in a consistent way. For example, we could all agree on SNOMED CT as the problem list but if the doctors aren’t using the vocabulary consistently it is still a struggle to get semantic interoperability, even if you’re using the same syntactic API, you may not get semantic interoperability.

So that’s where groups like the Argonaut are trying to profile at least the most common things in the medical record, the so called common core clinical data, which is regulated under Meaningful Use, (problems, meds, vital signs, immunizations, allergies, and conditions) and the
items making up 80 percent of the core of record. We are trying to get some agreement in these areas. It will probably be another year before we know if that will work. Then we will need to figure out what to do with the long tail, the other 20 percent that is comprised of thousands of things. This area is unknown; we’ll have to see. Some of it will be driven by demand, if customers ask for it, we will do it. This will be done from the bottom up—we won’t do it from the top down very successfully.

This concluded the 2016 SXSWi Panel on Improving Physician’s Understanding of Patients. A video of the entire session can be viewed here.