

# Interoperability as an Innovation Barrier?

Chantal Worzala & Blake Marggraff

**Matthew E. Hanis**  
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Management Intern



## Brief Description

Interoperability barriers between electronic health records create friction demonstrating safety, efficacy across large populations. Middleware solutions and provider interoperability consensus are the two innovation pathways. Technology focused around patient needs help to further advance communication and engagement.

Guests: Chantal Worzala, Blake Marggraff, Matthew Hanis

## Long Description

Technology should be patient, clinician, and real time focused. Many times technology is frustrating because it does not produce the advances expected. Additionally, making sure that technology is being adopted in a way that works for both those who have to implement the technology and for those who benefit, while focusing on the triple aim, cost, quality, and access. In order to overcome technology issues, creating an infrastructure that really allows efficient and effective sharing of information needs to be constructed. Creating an infrastructure that's accessible both to those with advanced technology like a hospital, but also accessible to those that haven't made this huge investments yet will benefit the end user in multiple ways. Technology also includes innovation around the private sector. There are two areas of focus within the private sector to advance technology. Firstly, provider community really has a responsibility to enunciate and come to some agreement on what it really needs technology to do. Secondly, on the technology side of the equation has a real responsibility to focus on that efficient and effective issue and to really commit. Using both areas of focus to streamline innovation is important for advancement for all major healthcare stake holders.

## Highlights

- Interoperability barriers between health tech platforms create friction
- Healthcare providers would like a simple solution to exchange data
- Innovators need objective evidence to demonstrate safety, efficacy
- To be successful, health tech innovations must overcome interoperability barriers
- Middleware, expertise are enables innovators to address this barrier
- Provider consensus still needed on interoperability requirements to remove/lower barrier

## Guest Lower Thirds

### **Chantal Worzala**

*Vice President, Health Information & Policy Operations  
American Hospital Association*

- Dr. Worzala holds her Ph.D. from the Johns Hopkins School of Public Health and an MPA from the Woodrow Wilson School at Princeton University, where her research focus was health services.
- Primary focus at AHA is health information technology (IT) use and policy development.
- Her topic focus areas include how to leverage technology for the purposes of improving care, how policy impacts meaningful use, electronic health record, deploying broadband, interoperability, telehealth, cybersecurity, interoperability realistic, prioritize policy process to collect and share data for care purposes, collect efficiently in care process, and many health systems making great Patient Engagement & Activation strides based solely on patient portal.

#### American Hospital Association

- National organization that represents and serves all types of hospitals, health care networks, and their patients and communities.
- Nearly 5,000 hospitals, health care systems, networks, other providers of care and 43,000 individual members come together to form the AHA.

### **Blake Marggraff**

Founder & Chief Executive Officer  
Epharmix

- Venture-funded entrepreneur at intersection of medicine and consumer tech
- Co-founded Epharmix in 2015
- Board Member, Institute for Family Medicine
- Formerly co-founder & advisor, Betabox

#### Epharmix

- Keeps toughest patients in touch with care teams
- Customers are providers with risk-bearing pop health contracts
- Evidence-based patient engagement proven to improve clinical outcomes
- Interventions for 23 complex conditions

### **Matthew Hanis**

Host & Executive Producer  
Business of Healthcare

- 25-year healthcare industry veteran
- Held leadership roles in health systems, payers, and commercial enterprise
- Day job leading Hanisworks LLC, virtual health business consultancy

#### Business of Healthcare

- Serves healthcare executives across all major industry segments
- Audience of over 10,000 stakeholders including 4,700 decision makers
- Editorially independent focused on meeting Mission and Margin goals

Time Stamp	Speaker	Transcript
		VO: the intersection of Mission & Margin is the Business of Healthcare
		VO: this Business of Healthcare interview explores the interoperability challenge in health tech innovation. We're joined by Blake Marggraff, Founder & Chief Executive Officer of Epharmix, a rapidly-growing digital health company and Chantal Worzala Vice President, Health Information & Policy Operations for the American Hospital Association. We start with brief highlights to help you decide if this is engaging and relevant to you.
	Worzala	we need to ensure that we know what the end users want. For interoperability and that we prioritize our improvements interoperability to the end user's needs and those end users include people, as well as, health care providers. And so, what we'll see is a growing number of folks saying, " Hey, I don't want to have to negotiate and actually create interoperability between my health care system and the skilled nursing facility. I want there to be an infrastructure out there that connects us all and when I have a need to share information, I just dial that number," the equivalent thereof, right?
	Worzala	And so, you're taking the health care provider out of the business of having to create their own interoperability and they're able to simply make use of an infrastructure that's built from standards that everybody's bought into and rules of the road that everybody's bought into, so that it's about the reason to share information.
	Hanis	So when we think about your P&L, you have a large cost of goods sold related to this very same efficient and effective integration problem.
	Marggraff	And, fortunately, ever smaller because integration is rapidly being commoditized. It's at the end of the day, just one HL7 or FHIR feed talking to another in specific ways. And my team is able to do that albeit with more pain than going through a third party. But that third party in a way is... Analogy is the TPA, so they can understand how to bring that innovation to more folks. And I think that's maybe the tipping point, looking in very much in the weeds, but looking at that integration layer, the middleware. The way that middleware can win and can also hopefully not get you beating them across the head for their getting in the way is by enabling seamless low friction innovation.
	Hanis	I don't know if this is a number that you share but what do you measure as engagement and what's the timeframe? What's the life cycle of engagement?
	Marggraff	Sure. In fact, that's one of our own key performance indicators as a team. So Epharmix is able to now sustain engagement at 61% for a full 52-week window every week which is darn tough for a lot of low socio-economic status patients, and over 50% for that full 18-month window which means that we're able to engage half or more than half of the population for the full window of financial risk for most risk bearing entities.
		Highlight break point
	Hanis	Chantal, tell me a little bit about your background.

	Worzala	Of course. So, I work at the American Hospital Association and I'm in our policy shop, working on health IT policy. And I really came to this from a policy perspective. I'm a health services researcher by training. um But think about how public policy can influence how healthcare is delivered and also support how healthcare is delivered.
	Hanis	you were at MedPAC at the time that many of the core ideas of High Tech, the incentives around meaningful use were being contemplated. Talk a little bit about that.
	Worzala	Yeah. And so, MedPAC was thinking about this question of, is there a public policy reason to ensure that technology is adopted in healthcare? And a lot of thought about who bears the cost of implementing the technology and who receives the benefit of the technology having been implemented, and a sense that those weren't necessarily always the same parties.
	Worzala	Because the healthcare provider will bear the cost of implementing the technology. And yet, if we're thinking about the technology as being able to, for example, avoid repeat tests. Well, that's not actually a benefit to the healthcare provider, that's more a benefit to the payer and the federal government.
	Hanis	How do we maximize current technology? How do we leverage the massive investment that we as a society have made into the technology infrastructure?
	Worzala	I think we're at a point right now where there have been a lot of investments made in technology but there's a lot of frustration that the technology may be isn't working as well as it needs to. And so, I think there's a lot that we can do to address the concerns of clinicians. That technology is a little bit clunky. Some of those issues that they have actually do go back to regulatory requirements and the vast amount of information that is collected really just to meet regulatory requirements. But some of it is the technology itself, the technology isn't connecting. We're not able to, to in a seamless way, take information collected in a physician office and make it available to the emergency room doctor who is seeing patient, or even information that a care manager might have about a patient may not follow into the emergency room if it's not the right emergency room, right?
	Worzala	And so, I think we have awful lot of work to do to create an infrastructure that really allows efficient and effective sharing of information. And it has to be through an infrastructure that's accessible both to those with advanced technology like a hospital, but also accessible to those that haven't made this huge investment, such as nursing homes, home health agencies, skilled nursing facility. Because if you think about some of these new value based payment models, you really want to be able to follow your patient across the continuum and make sure that information is going back and forth across the continuum. And in order to do that, we're really gonna need to create an infrastructure and a set of technologies that are really willing to make the handshakes and adopt the standards, so that the data can flow easily, efficiently and effectively.
	Hanis	Let's say, I am a vendor whose focus is on a primary care practice managing a CHF population. If I am bringing a solution to market, your point is that, I shouldn't be in my proposal. I shouldn't have a line item that is integration cost or interface development.

	Worzala	You should be getting to a point where the agreement among all about the infrastructure makes those kinds of cost unnecessary and/or part of the standard package, right?
	Hanis	Yeah.
	Worzala	If you buy a printer, it comes with the printer drivers. You don't pay separately for each printer.
	Worzala	And so, these things should be standard-based infrastructure items that everybody builds off to create value and to unleash frankly the kind of innovation that we need to make care better, more caring and more efficient.
	Hanis	And Blake, tell me just a little bit about your background.
	Marggraff	Certainly. So, I founded and now run the digital health company, Epharmix, which started out of a research project. And the goal for the research project is the goal of the company, which is to keep the toughest patients, call it the 20% of high and rising risk patients out there in touch with their outpatient care management teams automatically and in a disease specific way.
	Hanis	And, Blake, if you... As I think about it, that journey through the technology adoption occurred, you couldn't be doing today what you do, had that journey not began a few years ago.
	Marggraff	That's a great point. I think, on the patient engagement side of technology, a critical component of that is a provider infrastructure of technology. Technology doesn't just somehow magically deliver all of the information to the right place within a complex healthcare provision system. So, thank you very much.
	Marggraff	For all of that thoughtful and preemptive work. At the same time, there's a long way to go and I think where the private sector can perhaps step in and try to provide more value is by de-risking the adoption. It's just not fair for me to sit down with someone in the C-Suite at a health system or even health plan, and try to argue that they should take a risk on a technology. They're taking enough risk. Now they're taking risk beyond just the re-admission window for a long term care, whether it's fully capitated or through advanced alternative payment models. So I had better come in with evidence in hand and return on investment analysis associated with that evidence
	Hanis	describe for me the core Epharmix value proposition.
	Marggraff	Sure. So, because Epharmix keep the 20% of tough patients in touch with their care management teams, our core value proposition is composed of two things. The first is increased productivity. I want to make sure that the people who are darn good at doing their jobs can do more of those jobs in less time and ideally, with less stress along the way. No more cold calling, reach out to the right patient at the right time.
	Marggraff	The other benefit... So productivity is the first. The other benefit really is outcomes. In an increasingly value driven world, it's the health outcomes and even the prevention of adverse outcomes that create a lot of value for everybody in the chain, starting with the patient; don't forget. Starts with a healthier, happier patient and then rippling all the way back up to provider and the ultimate risk bearing entity.
	Hanis	How does a patient become an Epharmix user and what are their experience?

	Marggraff	Absolutely. So when a care manager decides to enroll a patient in Epharmix, depending on that patient's condition or multiple conditions, up to... We have now 24 different chronic conditions that Epharmix helps to support. Whether it's postpartum depression, or substance use in the midst of an opioid crisis, or heart failure, or COPD, or diabetes, that patient will receive messages coming from, actually coming on behalf of their provider, and will then engage with those simple questions about signs and symptoms. And that enables that outpatient care manager to reach out to that patient at the right time when necessary or not to reach out at all. And that patient continues to feel cared for through the light touch questions.
	Hanis	So you're asking patients questions. And what's the technology that you're using to ask them those questions?
	Marggraff	On the backend?
	Marggraff	Lots. However, on the patient side, it's the most ubiquitous, most well understood technology. Text messages and phone calls and, of course, because there's a decent population that is not comfortable even with those technologies Epharmix will go through a concerned caregiver. Will ask questions to someone who can reply on the patient's behalf.
	Hanis	Most everybody can text message. Perhaps some people can't afford to text message, but...
	Marggraff	It's funny you mention that. Even for those patients, Epharmix has formed relationships with all of the major cellular carriers
	Hanis	We have a set of current technologies. Do we have to achieve interoperability? Do we have another massive round of investment that's necessary or is there an incrementalism opportunity?
	Worzala	I think we're at a point where we need to ensure that we know what the end users want. For interoperability and that we prioritize our improvements interoperability to the end user's needs and those end users include people, as well as, health care providers. And so, what we'll see is a growing number of folks saying, " Hey, I don't want to have to negotiate and actually create interoperability between my health care system and the skilled nursing facility. I want there to be an infrastructure out there that connects us all and when I have a need to share information, I just dial that number," the equivalent thereof, right?
	Worzala	And so, you're taking the health care provider out of the business of having to create their own interoperability and they're able to simply make use of an infrastructure that's built from standards that everybody's bought into and rules of the road that everybody's bought into, so that it's about the reason to share information.
	Marggraff	And incidentally, I think that's where a lot of the players in this space especially on the private side, because we're always going to say, "Hey, we can do that. We can do it better and then get people to adopt it." We need to rally and listen frankly to you and ask, because you've seen this from the very beginning, and now with the AHA, this is one of the areas where I think you have more sway than any other institution. It's time to standardize and then execute on that standardization. Not that you ask but I really am optimistic that we can move forward as one.

	Hanis	you're using a very, very current technology that the consumer already has. There's no technology investment there. You are investing capital in, I would imagine, the algorithms, the marketing and all the other things you have to do to build a business to monetize. Talk a little bit about that.
	Marggraff	So I would argue that the risk that I'm taking is, Chantal, that you are going to succeed because Epharmix collects data in near real time that has a shelf life of hours, maybe days, right? Where it is usable in order to reduce costs. If I know that something or if a heart failure patient or a COPD patient reports some symptom that the care management team might need to follow up on, that only works if the pipes are in place and are not clogged and that can flow to the right person at the right time. So it's not, Epharmix is getting pretty good at asking the patient the right question at the right time. That's only half the battle. That only works if the providers can act on it. And Chantal, you made a point earlier, as well, which is that humans aren't going to go out of the equation.
	Worzala	Right.
	Marggraff	Even with a perfect web of technology, that really just enables more efficient top of license use of all of the folks that make up the health system.
	Worzala	Right. Which is something we all need to get to.
	Marggraff	Yep.
	Worzala	Right.
	Hanis	So we talked about the idea that we've made a fairly significant technology investment in our society. We now have a relatively sophisticated technology infrastructure but there's a little bit more that we need to do and that is I think your phrase was effective and efficient exchange, getting the right data to the right patient or clinician at the right moment in time without a lot of overhead. You've built or delivered one thrust in that direction, not necessarily a holistic and complete, you didn't solve the whole interoperability problem but if you did, we would like that.
	Marggraff	Thank you.
	Hanis	What's the responsibility of a private sector player to do efficient innovation in this situation? Where does that responsibility lay? Is responsibility the right word?
	Marggraff	So my soap box, I think, innovators generally forget. It's almost a tragedy of the common scenario. If everybody rushes in with an innovative solution, that puts the recipients of the potentially very beneficial innovation in a tough spot where they can't move forward safely and efficiently. I'd like to consider myself and my team, one of those innovators. But rather than just diving in and offering up some new and shiny thing, we've taken a much more evidence-based but also ROI-based approach because it's not fair for me to sit down with the folks who read the AHA's [chuckle] weekly newsletters and say, "We have this amazing thing, please use it," if I don't have a good reason to say that.
	Hanis	And your good reason is based on randomly controlled...

	Marggraff	Yep. My reason starts with randomized controlled trials that show engagement and outcomes, moves into a return on investment model that takes those outcomes and translates them to dollars, and then corroborates that hypothetical return on investment with past commercial implementations. So start with the proof that it works in a perfect setting, associate that best outcome with dollars, and then show that that is indeed what has happened in the real world, in real implementations in groups just like provider X.
	Hanis	And how many patients have been a part of the trials that you've operated.
	Marggraff	Wow. So I think we're up to 12 IRBs covering over 6000 patients. It's yielded seven peer reviewed journal publications and more than that number currently in review.
	Hanis	I don't know if this is a number that you share but what do you measure as engagement and what's the timeframe? What's the life cycle of engagement?
	Marggraff	Sure. In fact, that's one of our own key performance indicators as a team. So Epharmix is able to now sustain engagement at 61% for a full 52-week window every week which is darn tough for a lot of low socio-economic status patients, and over 50% for that full 18-month window which means that we're able to engage half or more than half of the population for the full window of financial risk for most risk bearing entities.
	Hanis	That's very impressive. And when you say engagement, is that once a month interaction? It's a respond to one text message or more.
	Marggraff	Weekly or more. It could be more in a full completion of the exchange.
	Marggraff	And anecdotally, because we're swimming in data, the patient feedback from mothers on Medicaid through to 75 year olds with multiple chronic conditions, to parents that might be managing a child with asthma, is it feels like someone cares. And often, it feels like someone cares for the first time which is not true. Someone has cared about that patient, and that patient's caregiver for a long time, it just didn't come through, it didn't show up.
	Hanis	Oh, interesting.
	Hanis	The private sector innovation, where does the responsibility lay there? What do you look for from the private sector?
	Worzala	I'll think about two pieces of the private sector. I think the provider community really has a responsibility to enunciate and come to some agreement on what it really needs technology to do. Because unless technology is meeting the needs of the end user, then I'm not quite sure why we're making the investment on technology, right?
	Hanis	Right, right. That's a good criteria, yes.
	Marggraff	Right.
	Worzala	But it comes with responsibility to take the time to come together to enunciate, "No really, this is what we want." This is the first thing. For example, one of those high priority things maybe, we need to come to an understanding of what's the information that we actually need to succeed in these value-based models, and what's the information about a patient that really needs to flow up and down the entire continuum of care, so that you can know throughout the course of their

		care that it's being done right, and that those who are engaged in that value-based model have the information that they need. So the provider community really needs to make its needs know. But then I think, the technology side of the equation has a real responsibility to focus on that efficient and effective issue and to really commit to say, we're not competing through capture and we're not competing through selling middleware and we're not competing through selling interfaces. We're making the infrastructure for information to flow as efficient as we can, and then we're competing on making products that really meet your needs.
	Hanis	What's your advice to Blake? So many of your stakeholders are Blake's customer.
	Worzala	It sounds like a great model. I think there are a couple of things that I would hope you're doing. One is participating in those conversations about what is the infrastructure and what is the standards base for the kind of work we were doing and how can we make sure that, I'm making this up, but let's make sure that your platform can integrate with any other platform without any undue work or expense on the part of your customer.
	Worzala	That's the key.
	Marggraff	Yep, I couldn't agree more.
	Marggraff	And a lot of our customers, Epharmix will cover completely the cost of the middleware, but we still have to use that because so many folks are using different versions, different EHRs period, and that's for a relatively small component of the care delivery process. So the more the broader we go, the more we will bump into that.
	Hanis	That's really interesting. So when we think about your P&L, you have a large cost of goods sold related to this very same efficient and effective integration problem.
	Marggraff	And, fortunately, ever smaller because integration is rapidly being commoditized. It's at the end of the day, just one HL7 or FHIR feed talking to another in specific ways. And my team is able to do that albeit with more pain than going through a third party. But that third party in a way is... Analogy is the TPA, so they can understand how to bring that innovation to more folks. And I think that's maybe the tipping point, looking in very much in the weeds, but looking at that integration layer, the middleware. The way that middleware can win and can also hopefully not get you beating them across the head for their getting in the way is by enabling seamless low friction innovation.
	Hanis	what is it if you could say to Chantal, from a policy perspective, if health delivery systems did X, we could scale and generate even more ROI?
	Marggraff	That's a really good question. I think the limiting factor for ROI in risk-bearing entities is, so once they've determined that they're going to move forward with one, or two, or three technologies and not 30, which in itself can cause them to trip over their own feet quite a bit. A limiting factor is how do they keep those patients engaged. And there's not an incentive, at least so far, to do that for the long term, but more and more, I think we'll see that begin to solidify.
	Hanis	What you're ask is, build the health system's capacity to be experts at patient engagement?
	Marggraff	Yeah. Build the health system infrastructure to be experts.

	Hanis	Got it.
	Marggraff	Once there is an outpatient care management capacity for any kind of health system or hospital, the ability to bear risk and I would guess, to take a much more holistic data management approach increases almost instantly.
	Worzala	And I do actually think that that's a trend that we're seeing out there.
	Marggraff	Which is good thing.
	Worzala	Yeah.
	Marggraff	Slowly and steadily making progress in a slow-moving industry, but a generally, truly, well-intentioned industry.
	Hanis	Thank you so much for joining The Business of Health Care today, I really appreciate your time.
	Marggraff	Great to be here, thank you.
	Worzala	My pleasure.