Why Interoperability Has a Bright Future w/Rob Brull

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Michael: And. Welcome to the Health Connective Show. I'm your host, Michael Roberts, and I've got Justin Bantuelle, the company's COO, here with me today. We are talking to Rob Brull. Rob is the senior product director at Infor. He's focusing on simplifying healthcare integration with software that is user friendly and empowers healthcare customers.

So Justin and I met Rob at Device Talks West and attended his session on how interoperability can save the day for medical device companies. It was a really great talk and we we're really excited to get more of your perspective today on why interoperability is so important and how medical device companies can really approach it. So Rob, thank you so much for joining us today.

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Rob: Thank you for having me. I'm happy to be here and happy to share whatever knowledge I have.

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Michael: Awesome, awesome. And we've gotten a sneak peak of the knowledge that you have. And so we know that there's a lot that we can talk about, a lot that we can dig into there. So let's just kind of start with, with a kind of a wide open question here, you know, why is it so important and beneficial for medical device companies to be able to connect their, their software with the hospitals?

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Rob: Yeah. So I mean, I think if you step back and look at it from a high level, you know, it just has to do with patient care and quality of care. So the more data you can get in, the richer the data, the better the result is going to be for the patient. And that's of course, the goal at the end of the day. So how are you going to use that data. Right. And so when we look at devices we're typically looking at pre-planning. So there may be a selection of devices.

It might be appropriate for any given patient selecting that that device based off clipboard data kind of probably maybe get to the correct device most of the time or it gets you in the right ballpark. Right. But the more data you can have about more details like chronic conditions and obesity and diabetic and all those things that are maybe spread out through all these visits these patients has had from all their different specialists, all their different providers. If you can pull that data in and get a more full holistic view of that patient and what their real health situation is and how the device might impact it from lots of different areas, you can do better pre-planning to get them to the best device.

You can also help set expectations. So based on how sick are they, how many chronic conditions they have, how long are they expected to heal? How long are they take to get to a certain point and then setting the plan of care, you know, after the device implant is taken place, setting that plan of care. So then you can have the best, most guided and focused care plan in place based on all the conditions that they're dealing with, not just this one condition. Right.

And so getting all that stuff in place really helps with dealing with the patient and making sure they get the best care and thus the best outcome. And then in addition to that, as you kind of get your data in place over time, that full set of data, then you can begin to use analytics and AI and really look at what if your outcomes been and how based on different related conditions or not related conditions, how are all those different facets impacting how the patient recovers, or how the patient, you know, is doing with their device?

And so just having that data in place, especially over a long period of time across your entire population, can then help you better guide patients in the future, do better pre-planning in the future. And so, you know, it's just all across the board. There are so many things you can do with the data. Once you get it in there. It's just a matter of getting the data in there.

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Michael: Yeah, absolutely. It can be a lot of a lot of hurdles to overcome there. So let me ask you a question just based on what you just said there. So you're talking about a lot of times when we're thinking about working with a medical device company, we're thinking very much just a singular device, right? We're not thinking about, like, I guess all of the different options that a hospital or that a physician has when she or here are thinking about like what to do next. So does Infor work more on the medical device side, or do you work more on the hospital side? And because it sounds like that, that would involve like a number of different medical devices connected to the sort of the same system, right.

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Rob: So we work across the board. And so we're in hospitals with our software doing interoperability and hospitals. But then we have lots of vendor customers. So the vendors are going to use us as well to get data to and from the hospital system that they need, or even the payer system or directly from the patient. So it's going kind of across the board, right, with regards to exchanging data. So there's, you know, new rules out from the government, from the CMS centers of Medicaid and Medicare that push for broadening the scope of data that shared between patients, payers and providers and doing that in a more modern format that's called FHIR – Fhir Fast Healthcare Interoperability Resources – that uses APIs in healthcare.

But kind of back to your question, data impacts health care at all levels. So what we see from a vendor perspective is. Now, how can vendors make better decisions for their devices? How can they do analytics and help understand how their devices are working and that impacts their product roadmap impacts how they develop and what they want to focus on for the future, and how they position themselves as a leader for their particular device. Right. And all that data that can be gathered and utilized to help guide them is a big advantage to getting that data available and just utilizing it to make better products. From a vendor.

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Michael: Perspective, it's interesting because as your as you're talking about like sort of all the different complications and all the different comorbidities and all the different things that can be going on with patients, you know, sometimes you look at like a particular device and you go, oh, that's the solution for patients with arthritis. And what you're talking about is a much more real world, much more nuanced type of patient, where of course, all these other factors impact, you know, their care. Of course, all these things are going to matter. How have you seen that play out, you know, and how companies are using that kind of data?

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Rob: It's relatively new with the advancements in AI and analytics really taken off. There's that part of it that, you know, we have better tools now to do the analytics, but then it's also the part of we're finally getting to the point where vendors can get access to more data. So

if we look at interoperability in general in healthcare, it's been really hard for applications to get access to the data they need. So when you look at kind of interoperability in healthcare over the decades, you know, healthcare still primarily uses data formats that were came around in the 90s. So HL7 v2 is the standard where most data today is still shared by that standard, which came out in the early 90s.

And it's, you know, for anybody to know, it's a string of data and it's delimited with pipes and hats. And if you know what's between the pipes and between the hats, you can get to the data that you think you want. But then some people read the standard differently, and they determine that they may want to put that particular data in a different place. So it's not where you expect it. And what you think you're getting is not really what you're getting. And so it's just it's really hard to take this data format and kind of from lots of different places.

So if you're a vendor, you're dealing with lots of different hospitals that have these 72 message types that each hospital kind of has their own little flavor of it. And then you're trying to figure out, okay, so I got kind of this archaic data format coming in that I got to do something with. So I got to have somebody that's knowledgeable about that data format before I can even parse it out part and put it in my database. And then everybody has their own flavor. So I got to customize it for everybody, and then I got to normalize it in my own database.

And then after all that, I can have my application team get access to the data. And it's been a real a real challenge in healthcare to consolidate data. But the ONC and the CMS and the government organizations are pushing towards a standard in healthcare called fire that is API based. It's Json based, it's flexible. App developers love it. There's normalized APIs for going and getting the data. So there is this light at the end of the tunnel that we're getting to a place where we can get to the data in a more efficient, more realistic way, store consistently, have the apps, just connect to it.

Everybody's data is the same. And so but right now we're still sitting at, you know, 5% of the data shared is through fire and 95% is through HL 72 or kDa. So we still have a long ways to go. But there is that turning point. And so, you know, kind of back to your original question. In the past there just there hasn't been the technology. And they're in two fronts. One for from standards and formats and one from kind of analytics. But now with both of those kind of making major changes recently, you know, we're getting to this point where people can do much, much more, get much, much more data and do much, much more with it. From a vendor perspective, that's exciting.

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Michael: That's nice. So you mentioned light at the end of the tunnel. Are we five years out, 20 years out? How long until we're in this kind of nirvana where data will be? You know, I hope.

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Rob: It's not 20, but health care does move slow. But that kind of leads me to like something else I want to talk about. And that is that the tools that are available out there now to kind of take legacy data and bridge the gap to the modern file format. And this is something I talked about at Device Talks. But there's of course in for who I work for has some of these tools, but there's other tools out there on the market that allow you to take legacy health care data.

And by legacy I primarily mean HL7 v2, which is the stream limited format we talked about, and then HL7 CDA, which is the document based format which became popular in meaningful use for transfer of care because facilities had to send these CDA documents as part of the transfer care requirement, and then also X12, which has some financial transaction. And so those are kind of the three big legacy standards.

So if you take those three and you have pre-built tools to convert them to fire, then you can kind of bulk fire in front of these legacy systems that the hospitals and payers have, and then make that data available to vendors in the format that they want, and then without having to have their own resources on staff and their own experts on staff to understand these legacy standards, they can buy a solution, put that middleware solution in front of all the legacy data that that they can get, and then save it in a modernized way. That then just enables their app teams to go to town and do the work that they really want to do, rather than messing with interoperability and figuring out data standards.

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Justin: Do you see that more as a sort of a persistent translation layer, or more as like a one-time migration of data to shed the old formats?

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Rob: Yeah. So it's a persisted layer. So, you know, you the HL7 v2 format is a push type format. And so if your hospital's using Cerner or Epic or any of the big EHRs, they're going to be sending you HL7 v2 messages. And those come hundreds of thousands or millions per

day. Right. And a lot of them are just real repetitive data. So you got to have a system there that's able to receive that data ongoing forever or, you know, hopefully not 20 years, but for the next ten years or five years, receive that legacy data and then convert it on the fly constantly and update your fire database or fire what they call a fire server in the fire world, that is just a repository of FHIR data, and it has to be smart enough then to not just blow up your database by repeating all the things that HL7 v2 repeated, but be smart enough to just update when it needs to be updated, and create new records when it needs to be created, and keep a nice clean database that that can be worked with.

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Justin: That makes sense that yeah, they have a lot of services and tools that are continuing to use these legacy formats. So you need to consistently talk to it. It's not like a one-time cut over because they can't cut over there. Other systems. Yeah, that makes a lot of sense.

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Michael: We're talking a lot about the technology layer of this. And anytime that you're trying to get anybody in I'll say anybody in health care. But really I think this is just kind of a even a bigger problem, a bigger challenge, like people from all these different organizations agreeing to share the data in the first place. What kind of hurdle is that to overcome to just get that process going? It sounds like you're more involved when everybody's agreed and ready to move forward. But how long does it take to get there, I guess, yeah.

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Rob: So as a vendor, typically, you know, if you're right in your contracts, there will be something in there with regards to access to data. Right. And so that's something that that can typically be ironed out with going into hospital and doing that initial contract and saying you need access to EHR data or whatever data you want access to, you'll get so that that's one part of it, right? The second part of it is, you know, how long is it going to take you to get that fee that they promised to you in the contract? And what are you going to be able to do with it?

So if you can go in, if you can be flexible and say, hey, in hospitals, especially for like ADT, for the discharge and transfer type data that comes through HSM v2, along with the order messages, order results, vaccines, appointments, some of the more common ones. Those

data feeds are already going out of Epic and typically into an integration engine at the hospital. And then that integration engine fans out those V2 feeds to all the downstream systems. So the vendor would be considered a downstream system. So they're already doing that. So if you can say, hey, I know you got your ADT feed coming from epic. You know, it's probably typically they sent everything that I think anybody would want in that ADT message.

And then if there's certain things that they don't want to see a certain downstream system to have, they can filter that out. But if you can say, hey, we know that you've got data that comes out of epic, goes into your integration engine, and you found a downstream system, we just want to be one of those downstream systems. You don't need to tailor anything for us. You don't need to do anything custom for us. Just send us what you got. And then we have the tools to kind of accept that and convert it to, you know, a modern standard that we're going to utilize anyways.

We're not going to utilize the V2 or CDK with our system directly. We're going to convert that and put it into a fire repository. That helps speed up the process a lot. If all they got to do is like create a new route in their engine and send it to a new place, you know, that's easy for them. A lot of times the contracts is the hardest part. But like I say, if you're a vendor negotiating with the hospital to get your product to be utilized by then, it's typically a line item that spells out what you have access to.

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Michael: Gotcha.

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Justin: Um, there's something that you all do as well, right? Like, I think I remember talking to you about some of this previously where you can fill in an extra gap. I know some of these medical device companies, they want a limited subset. It's like, don't push everything. To me, that expands the level of risk I. Taking on. I want as little data as possible to get my job done. Don't just push everything to me. I think y'all. And then often they're like, I'm operating in a cloud space, so I need at least a certain level of data, like cut down, like, and you'd mentioned that you'll handle that. Right.

And that helps with some of the legal concerns and the back because the medical devices can be very, um, very reticent in how much they're willing to take on the I think some of the developers, some of the product people, they're like, give me everything. Like, look at all

the cool stuff we can do. And then the legal and regulatory departments say, no, you can't have that. And that's where some of this battle happens internally. And I think you all provide a layer right where you're, I think a device in the hospital that can push out with a much more filtered or structured, more deliberate set of data that everyone's agreed on.

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Rob: And that would typically happen at that conversion layer as you go from HL7 v2 and CDA to fire. So you're really storing your data in the fire format. The messages that come in through V2 or CDA, they're just going to go into logs and then get deleted at, you know, after 24 hours. So the big risk is the data you're storing, which is the seven fire data in your fire repository. And so at that layer where you're doing that conversion from legacy data to fire data, certainly there's at that layer you can filter out whatever you want. And so you can really if your legal team says, hey, we don't we don't need all this other data.

We're not going to use it for AI. It's not valuable to us. We don't want it hanging around. Sure, you can have a very focused set included in your repository. What we've also seen is some people will have multiple repositories. One might be a de-identified repository that they want to have kind of more general access to that they may want to do for health or clinical research or other types of related things that they might want to pull into the scheme. And so those de-identified repositories don't have to be as secure, and you can make them open to more people.

And then you may have, you know, a repository that is much more secure. You maybe have two repositories. You got one that's locked down to has all the data is really locked down, and then one that has focused data for a group that only needs that particular piece of data. So you can you can have layers or you could do it however you want. But yes, it's you can be very flexible as to way you the way you sort and mix the data's the data repositories to, uh, you know, make it available in secure in the way that you want to.

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Justin: That makes a lot of sense. Yeah. I think kind of related to this. It's funny, we were having a conversation just the other day with, uh, somebody who had mentioned that, uh, I think like HIPAA and these regulations, they exist, um, not to stop you from sharing data, but to define how you're supposed to share the data. So it's not supposed to be a barrier. It's not supposed to be an obstacle in the way, but it gets treated that way so many times.

Right, where people just give up because they don't want to deal with the regulatory hassle. But it's like, well, no, the pathway is supposed to have been carved out. This is very important information that really, like you mentioned at the start, elevates the care of the patient when you have it. And I thought that was a very succinct and salient way of highlighting the importance of what we're trying to achieve here and what you all do.

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Rob: It's definitely important. And it's from our perspective, we just it's just something we deal with every day because with, with interoperability and open, our customers achieve interoperability and storing data. It's yeah something that's just on our minds all the time. But you know it's like you say it's there for, you know, protection and making sure that people's lives are kept secure. They want them to be kept secure. And, uh, but at the same time, making the data available so that the vendors and the health systems can do what they need to do to provide care and to provide population health and things like that as well.

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Michael: One of the things that I've been, I guess, kind of thinking through as you're talking about all of this is like, yes, we can definitely filter the amount of data that's coming to the medical device company, that sort of thing. So let's say that you're the medical device company and you're like, yes, I want this. I want to have data coming back. You know, like right now I can tell that we had our clinical trials. We know that we have a good device. We know that it's going to be helping people. But now we need that sort of like ongoing real world presence to that.

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Justin: Like the evidence that the outcome was improved, like you're showing the volume of data that yeah, the continuity of care post procedure proves out the value of the device.

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Michael: Or medical device companies come into you then with like a list of physicians and saying, you know, we want these hospitals, these physicians, how can you help us kind of tell our story as effectively as possible?

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Rob: The idea is to get to as many sources of data as possible, right? So wherever you think the patient would go for care, it would be prudent to try and establish that that link. Right. So if you have a contract with the hospital that they're using their your device, that's one thing, you know, to get access to that data. It's a little bit harder if you don't have that type of direct relationship. Especially on the ambulatory side. But there is, you know, updates that that are made, you know, if an Epic hospital has providers that they work with and our partners with, hopefully that data comes back into the epic EHR and then you can get access to that data from providers epic EHR.

There's other things happening in the industry with regards to like sharing those summary of care documents and making available those documents for care. That's ongoing care. And so there's new things emerging and then there's more sharing going on between providers, specialists and, and health systems. That would make it, I think, easier to get that data, or more likely, I guess, to get that data from the health system itself. But yeah, in in certain cases where, you know, you know, that your patients are likely to visit certain facilities based on those specialists, right?

You know, there's things we can do or that can be done in the industry. One thing is typically the hardest part is, is, well, one the contract, but two, just making that connection, because a lot of times the smaller facilities don't have the robust IT departments to to do that for you. And so at info in particular we have what's called a secure courier, which is just a little agent that it's easier for. It's easy for just an analyst or anybody at a remote site to kind of put that download and install that in their system and then link it to their medical record so that then that data can easily flow back to the vendor.

And so there's ways that we have and that others have as well, in order to make it easy for what we typically call remote sites to get that data back into the ecosystem. And so, yeah, I mean, it's still you have to go through that effort to establish the, the contracts and get the permissions. And but from a technology perspective on with our products, we try to put those tools in place.

So even at smaller facilities, you know, even mom and pop type providers with just a, you know, may just be a doctor to we have that really easy way where you can just drop this executable and configure it, and then we'll connect to it and make all the rest of the

configuration settings kind of centrally so they don't have to. And so it's really easy. But from a technology perspective to kind of pull in some of those smaller facilities.

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Michael: One of the things that I'm kind of hearing in just, I guess in a lot of conversations and hospital systems, health systems are all facing constraints on finances, like things are better than they were last year. But last year was hard, and it seems like they're just starting to get to where there's some daylight. How often or how quickly does something like a solution like yours kind of pay for itself? For a hospital, when you think about being able to use that data more effectively as a hospital. So we've been very focused on the medical device side. But how does that help? Yeah.

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Rob: Boy it depends. All across the board we have business analysts that will kind of walk through a business case. And you know, a lot of times it depends on what what's your current situation. How hard is it for you right now to get the data you need. And what is it impacting how much like manual work are you doing or how much I don't know, how many inefficiencies do you have and how many phone calls do you have to make. And it's typically kind of those operational type things that are what gets the payback.

So I don't know, it could be as quick as six months, but it could be 2 or 3 years. It just kind of depends on the situation. But uh, but yeah, it, it's and it's always a hard one to put your finger on, you know, because it's eliminating you kind of putting a dollar value on all those inefficiencies is, is hard sometimes. But, uh, you know, I think the biggest, I would say uptick we've seen in interest over the past year, especially as just from vendors wanting to be innovative because especially, I think with AI and then wanting more data, bring more data in so we can do more with it.

That, I think drives the incentive to purchase interoperability product more than anything, because they I think a lot of vendors that are wanting to get ahead of competition and wanting to be innovative are looking towards, gosh, we need data to do that. How do we get more data in?

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Michael: Yeah, yeah, I think both.

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Justin: To iterate on the product, uh, product, but then also to prove the value of the product for the sale. I'm seeing, I'm hearing on both sides of it that this data is really, really important for them. And I think everyone just sort of assumed, oh, we built a great product. Obviously hospitals are going to want it, and they want a little more evidence that a lot of the time for sure. Yeah. And a lot of it feeds back into the reimbursements.

And that's where again, some of that EHR data getting into like people's insurances and how that can prove out like hey the reimbursement on. This and how quickly you got it. There's all kinds of aspects to telling a very compelling, holistic story. And historically. Yet the device companies have had none of this data, and hospitals are too busy to prove it out for the for the vendor.

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Michael: Rob, you're mentioning that you worked with some very small groups, very small hospitals. How much are ambulatory surgical centers playing into that? Because that seems to be what every medical device company right now is, is moving towards. We've got a brand new solution for the AAC, and this is going to be the future of our company, and this is going to be so great for us.

But that story still needs to be told in that setting as well, especially since a lot of those are either, you know, VC backed or physician run. And so both of those groups are very, very keen on what the costs are and what the return is on each, each case.

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Rob: Yeah, we've seen that the, uh, the surgical centers or whether it be radiology, you know, similar in size, they're definitely cost conscious and they definitely don't have the IT teams at the big hospitals. And so we have flexible pricing levels based on volumes and number of connections. And that makes it a lot of times more manageable. We have to be really concerned about how hard it is to configure the software itself and how hard it is to set up new interfaces.

So we've got a lot of drag and drop capabilities, no load, no code that an analyst can do it. So you don't have to have a coder type to come in and set up our software. We try to make it palatable. Right. But yeah, definitely the cost is always a concern. But it goes back to just,

uh, you know, justifying the efficiencies that they're going to gain and the other value that it provides.

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Michael: Rob, thank you so much for letting us quiz you on all these questions that we have, all these all these ideas that we have. It seems like overall there's an optimistic outlook to have here. Like people are willing to they're trying to get connected and trying to move forward. Is that kind of the overall center?

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Rob: Absolutely. I think like I said, there's the two biggest things I think are the new fire standard, which just allows app developers to do what they've always wanted to do. So every device vendor has smart developers on staff, right, that are developing the product that are used to using modern standards. They know about web services, they know about Json.

They've been wanting to do this stuff for a long time, and for them to finally have the reins taken off of them and have access to this data and the fire standard. The idea of that is pretty exciting. And so that along with, you know, the AI and analytics stuff moving forward, a lot, a lot of hope and a lot of good things, I think to come and interoperability and data usage in healthcare.

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Michael: That's incredible. That's exciting stuff. So thank you so much, Rob. We talked had a very good overview of what interoperability looks like today. Where it's going in the future is exciting stuff. Thanks for everybody for listening today. You know, for more on the Health Connected show, please visit HC show for previous episodes and for Health Connect as a company. Thanks so much.