

E5: Digital Health Trends in the COVID-19 Era

Steve: [00:00:00] I'm your host, Steve Weichhand with Divurgent. Today, we're going to talk about digital health trends and how those trends have shifted given the COVID-19 pandemic. I'm fortunate to today have me have with me a long time friend, Luke Bonney, the CEO and co-founder of Redox. Redox is a platform that connects digital health applications to over 700 organizations.

Luke began his career at Epic, where he spent six years. After leaving Epic, Luke started 100 Health, the health IT incubator and leveraged that experience to co-found Redox. Luke is in a unique position in that he has direct access to some of the most innovative healthcare and health technology companies in the world.

So I'm looking forward to hearing what he has to say about trends in the market. Luke, welcome to the show.

Luke: [00:00:55] Hey Steve, it's great to be a part of the show and great to reconnect.

Steve: [00:00:59] Alright, well let's jump right into this. Can you first give us a high-level overview of what Redox does and who your customers are?

Luke: [00:01:13] Yeah, that sounds great. So at the core, we built Redox to help healthcare technology companies integrate at scale with provider organizations anywhere. This is a problem that we experienced both while we were back, working with EHRs and as healthcare tech entrepreneurs ourselves. What we experienced is that there was no platform. There was no single place to go for people developing technology in healthcare who wanted to build scalable data integration. The status quo is everybody had to build point to point integrations themselves and we saw that as hugely painful and redundant. So at Redox, we see [00:02:00] ourselves as a platform designed for developers to make it super easy to onboard, and then integrate at scale with provider organizations anywhere.

And as you said, we are connected today to over 700 healthcare organizations, north of 25% of hospitals in the US we've integrated with, basically, I don't know the exact number is I think it's over 50 EHRs is at this point. So the tagline we like to say is every EHR you've ever heard of and a whole bunch, hopefully, you've never had to hear of.

Our customers are the people building technology. So we have hundreds of applications built on top of the platform and our job is to connect them and help them

scale, data integration, and whatever provider organization they need to work with.

Steve: [00:02:46] Great. So you mentioned your customers are these health technology companies.

Could you expand a little bit on the different types of companies that you work with? I guess maybe starting with in normal, non-COVID [00:03:00] times, how do you segment those customers based on the solutions they provide?

Luke: [00:03:06] That's a great question. There are lots of different ways you can look at segmenting a market and the way we've looked at it is, you know, we see Redox as a platform with a two-sided network. We have the supply side of that network, which is all the people building technology, the developers that are building technology; and the demand side of that network, the provider organizations that are purchasing, consuming, and ultimately using that technology.

So when we think about how we segment the market, what we like to do is we actually like to study and understand that demand side. So provider organizations, large healthcare organizations, what is the type of technology that they're purchasing? What are the categories of technology that are solving the most pressing problems at provider organizations. Understanding that helps us understand how to segment the thousands and thousands of technology companies, and that also helps us understand, how do we prioritize those based on the likelihood that they're going to be adopted in healthcare organizations. So that's kind of the core methodology is, is again, we think about supply-side and demand side. We really use deep research on that demand-side to help us understand how to segment all the different technology companies.

Steve: [00:04:31] So the healthcare industry, and I think it's fair to say probably close to every industry, has been dramatically impacted by COVID-19. Digital health, I imagine is no exception. So Luke, talk to me about what you saw starting back in March of this year, when the pandemic started.

Luke: [00:04:54] I remember the specific day when it became apparent that COVID-19 was [00:05:00] going to have an impact. We were actually at an offsite location with our leadership team when we got the phone call that HIMSS, which if you're listening to this podcast, you've probably heard of the HIMMS conference, was canceled.

And that was like a, "Oh man, this just got really serious, really quickly." so that was the moment when we kind of shifted gears as a company and it really started to help

us understand that we needed to elevate our awareness of what was going on because things in our market we're going to start shifting really quickly.

So one of the first things we did is we, we really dug in and started to ask ourselves, what are the market dynamics at play? What are the data sources we have available that we can start to study. One of the first things we saw, it wasn't necessarily in March, but really late March into April, when we really started to see the surge of COVID across the country.

One of the things we can look at is, [00:06:00] we can actually look at traffic volumes across our platform and what we witnessed is that traffic volumes basically cut in half. The traffic that we experienced in early April was equivalent to what we refer to as "holiday traffic". So basically traffic volumes that we would see on Christmas or New Years.

So what that helped us understand is that everything that wasn't critical, ambulatory visits, elective procedures, all these different things had been totally cut away. and that's, that was the state for, for a lot of Q 1 Q2, where we saw that drastic cut. And then we slowly started to see that traffic volume come back.

And today, the way we look at it is we've continued to grow our network. So we continued to add provider organizations, but overall, what we're seeing is in those core areas of ambulatory visits and elective procedures, the areas that really went to zero, those have recovered, but they haven't recovered back to a hundred percent. We would estimate they are somewhere between 85- 90% That was kind of the first thing that we saw, this core shift in overall activity. The other thing that we saw was a huge shift - again, think about the demand side of the market, and narrowing of the types of technology that healthcare organizations were interested in using. Whereas before, you know, dozens of different categories and everybody was effectively driving adoption in healthcare organizations. We saw this really narrow into specific use cases that were helping provider organizations combat COVID-19.

So this is where we saw telemedicine explode and go through generational growth, because telemedicine was the way in which provider organizations could continue driving patient engagement, [00:08:00] and for ambulatory practices, it was really their lifeblood financially. We saw explosions in remote patient monitoring.

How can we continue to care for patients outside of the physical constraints of an ambulatory visit or a hospital bed? And then of course, the third big one was diagnostics. Any testing company in the country shifted to become a COVID-19

testing company and then it was all about what can we do to scale the availability of testing.

Those are the first three that we really saw and what we've seen since then is kind of a fourth category that's grown - is anything having to do with process automation. So on the provider side, they've been hit very hard financially. They've had to lay off in a furlough, a number of workers.

So the fourth area of technology that is really starting to grow quickly is anything that can help them achieve the same or better outcomes with a reduced workforce. So think about automation and AI as kind of [00:09:00] that broad category.

Steve: [00:09:04] Now that's interesting how you were able to really watch that cliff, you know, occur in the drop off of traffic and really correlate that to what you see in times when it's only mission-critical services, and not those elective procedures. I really want to dig in more into it.

You know, those areas that you saw of rapid adoption. Those that actually increased level of demand, like telehealth and diagnostics. So I want to shift a little bit to talk about those, because clearly they've been an area of high demand for those in the industry, almost everyone seems to be talking about them.

Telehealth specifically, allows health workers and patients to remain safe while also increasing the [00:10:00] convenience and accessibility of care. You know, something that was already increasing in adoption but it was accelerated, dramatically. So you mentioned a couple of these, but beyond the traditional outpatient physician to patient telemedicine visit, can you talk a little bit more about the trends in telehealth that you're seeing, like remote patient monitoring?

Luke: [00:10:25] Yeah, I mean, maybe I can start with what we saw, not just the different use cases, but maybe some of the drivers of telemedicine adoption and enablement. So the first thing that I think is just really important for us all to recognize is COVID has really pulled forward the kind of realization that the patient [00:11:00] as consumer model is real, and works.

There is a study that, that we read something like 85% of people who interact, via a telemedicine visit or, or a secure video visit said, "I would do this again and I would prefer to do this than going into the office". So what we saw with COVID is it forced what I think a lot of people outside of healthcare saw as obvious, which is -why do we have to keep going into the office? There are all these examples where we can interact

at a distance. And I think that you know, the genie is kind of out of the bottle there, I don't think we go backward. Right, I think that the overall experience of being able to interact with a healthcare professional on-demand, at a distance digitally is the way that that's going to continue to grow. So that's number one. Number two is we saw some significant easing of regulation that we think is going to become codified, that'll be, that'll be permanent shifts. It was 10 years of lobbying that Teladoc and Amwell and other major telemedicine providers were going through to try and get telehealth visits, reimbursed at the same rate as an in-person , or a similar rate. What happened overnight when COVID hit is the federal government came together and said, guess what? We're going to reimburse you at equal rates. When people saw that, it just kind of opened the flood gates to say, not only is this great for patients, but this is great for us financially as providers. And then the second really interesting thing. And this will be an interesting question to see if this does stick or not. Is they eased the restrictions on providers being able to practice across state lines. If you think about that, what that's really doing is unlocking the supply of clinical care for patients. So those two regulatory shifts I think, are really interesting. Again, not just as COVID-19 is accelerating telemedicine, but is there more permanent change?

When you look at telemedicine itself, there are tons of trends, that are really interesting. We have the big guys, you know, Amwell is out raising money, Teladoc has merged with Livango. So they obviously see it as an accelerant and the big players win.

We've also seen an explosion of startups that are trying different models, much more that are direct to consumer, much more that are highly specialized in specific care settings or, or care models. So there's a lot going on. I would say the last thing, as it relates to telemedicine, I think the dynamic of payers [00:14:00] is going to become really interesting as payers play more and more of a role in being that digital front door for you and me as members. A huge part of that is providing a platform for telemedicine visits, a way to discover and interact with providers. So I think the role of payers as the kind of key place where we go to engage with initial care, could be a substantial, change and impact to the industry that has been enabled by telemedicine.

Steve: [00:14:31] It's really interesting watching all of those new models unfold, and really rapidly unfold given all of the regulatory changes and demands that you talked about and you can definitely count me in one of the 85% of patients that tried telehealth that would go back or would prefer a telehealth. I was a skeptic prior to trying, but, yeah, afterwards, I I'm in.

I want to [00:15:00] stick with the, the telehealth topic, and talk more specifically

about EHR integration, which in my opinion is a critical component to creating a seamless experience for the physicians and patients and office staff, you know, providing that care.

And Luke, given our backgrounds, working in the EHR space, if you're anything like me, you know, it's something that I'm particularly interested in and seeing, you know, how EHRs and telehealth can work together or be a part of the same system. So at a high level, what types of data are these telehealth companies reading or writing to the EHR?

Luke: [00:15:47] Yeah, it's a great question. At a high level, what we're looking to do is enable the initial match of a patient and a provider. So that's helping understand [00:16:00] what the problem is that the patient is looking to solve or needs, and the availability of a provider. So think about that as a patient, getting scheduled.

It's usually kind of a workflow number one . Workflow number two, you can think about is how to enable the actual visit. So what does the provider need to be able to see and understand about that patient? If they're working from within a telemedicine platform, what do we need to pull out of the EHR? So they can understand that kind of core context as they engage with a patient.

That's kind of a workflow piece number two, and then you can think about workflow, piece number three as what happens after the visit? So what needs to be shared back to the patient? What needs to be stored back into the EHR, either clinical context that needs to be stored back and/or billing information that needs to go back so that we can kick off the revenue cycle. So that's kind of the three core phases.

We've taken that a step further and really tried to identify workflows based on speed. What can we enable at different levels of speed? So for each one of our verticals, telemedicine one of those verticals that we really target, we have what we call a rapid deployment model and the rapid deployment model is what we've seen get live from the first touch to live at a health care organization in five days. Think about that as the minimum viable integration to enable a telemedicine platform, then we kind of have a standard integration and that's more like the four to six weeks that we can get live and that's typically both read and write and then we have an advanced workflow and that workflow is going to take longer, there's going to be more nuance to it.

And we typically recommend that an advanced workflow is something that a telemedicine provider would want to do as a later phase because while it might be valuable trying to do that upfront will actually slow down time- a value realized [00:18:00] by your, by your customers, the providers.

So we kind of think about categorizing workflows in those three buckets, rapid deployment, standard, and advanced.

Steve: [00:18:15] I imagine back in March/April when COVID hit, organizations not already live on some sort of telemedicine solution, I'm sure they were extremely interested in a rapid deploy model.

I want to shift gears a little bit to talk about a different type of digital health solution, one that still saw a lot of demand as you mentioned earlier. As our economy works to create tools to report test results to [00:19:00] state registries, from your perspective, talk to us how we as a country handled rapidly connecting test results with public health departments and where we're at today.

Luke: [00:19:17] I'm not going to comment too much on our nation's response. I think in our healthcare system and how things work today, there's a number of constraints. What we really experienced at Redox was our customers and our partners. Basically, you know, showcasing feats of Herculean effort, sustained effort to do whatever they could to expand COVID-19 testing. One of the groups who we started working with at the beginning of COVID-19 is Curative Health, They had just gotten started as a company, in late 2019, early [00:20:00] 2020, and weren't even necessarily focused on COVID-19 until COVID-19 hit. They completely pivoted the focus of the company and they've basically gone from a handful to over 900 employees, and we are now helping them scale the ability to report test results in all 50 States. At Redox, we are the ones helping them actually integrate shared data at state registries across the country.

That story is fascinating because, you know, obviously we've been, we've been really close and continued to track how Curative has grown and the different problems they have run into, but the problems that have limited them in different ways, are crazy. It's like, how do we set up a drive through clinic? Problem one is - how do you interact with the necessary volume of patients on the front end? And do you do that with partners or do you do that on your own? One of the next big problems that they shared with us was a [00:21:00] literal shortage of the necessary plastic tubes to run the test. Then of course, on the backend, it was the infrastructure to then report those tests, and that's the part that we supported. But what's clear is that. As a country, we didn't have that infrastructure. There was nothing that people just plugged into. but what's also clear is as a country, a ton of people tried to figure out what they could do to solve that problem. Curative is one story of many that we've been a part of that at the end of the day, it makes us really proud of our work. Really proud of how we help our

customers and then the impact our customers have on our US healthcare system. S

Steve: [00:21:55] Sticking on this topic of information, sharing and [00:22:00] interoperability, what other segments of healthcare beyond payers, providers, and public health agencies are starting to show an interest in EHR data and are there other trends that you would like to call out related to interoperability?

Luke: [00:22:22] One of the other big players that has become, and will continue to be very interested in clinical data are our large payer organizations, There's a number of reasons for that.

Obviously it helps them do their core jobs better, but over time, we're seeing that payers continue to look more and more like providers that continue to own and manage larger populations of providers, and the same thing on the provider side. Large provider organizations are standing up, have stood up, and will continue to stand up their own, payer organizations.

[00:23:00] So, you know, historically we've obviously had this significant differentiation between those groups that provide care and those groups that pay for care, that line is going to continue to blur. And I think there's a lot of folks, myself included who think payers are going to continue to have a growing impact in the space.

Number one, it's as, as patients and as members, they represent our core financial tie to our, to our healthcare. So how do we pay for it? And I think because of that, for a lot of people, the payers actually represent the first place they're going to turn when they, when they have a need for care. That's number one.

Number two is at least in 2020, while provider organizations have been hit really hard from a financial standpoint, hundreds of billions of dollars in losses to provider organizations. Payers, conversely, because there's been such low utilization are sitting on top of lots of cash, and the question is what are [00:24:00] they going to do with it?

So for all those reasons, we think payers are really interesting and it's something where we're spending a lot of time studying. The second category that I think is always interesting is big tech. So what are the Amazons and Microsofts and Googles of the world really focused on. That's an area where some of our payers were spending a lot of time building relationships, getting to know them and understanding how they could leverage Redox.

But at the end of the day, a lot of these folks want to be the cloud hosting or cloud storage answer for large provider organizations. And the adoption of cloud has been really, you know, slow, within healthcare compared to other industries, but we're starting to see that meaningfully pick up.

And there's interesting implications as you think about how does AWS make itself relevant, to large provider organizations? How does, Google cloud GCP, make itself more relevant? What are the competitive advantage advantages that they have?

Then I think the third, and this is one that I think is really interesting, is the fully tech enabled, kind of novel clinical care delivery models that are primarily tech enabled that have been built more recently and are therefore not constrained.

And I think these are groups that I believe are bringing really novel solutions. They're going to start to occupy a larger space when it comes to how care is delivered.

Steve: [00:25:41] Thanks for sharing that and I'll jump to my last question, which I think aligns nicely with some of those really interesting use cases that you mentioned. At Redox I know you have a saying, [00:26:00] "We are all patients". As a patient, what digital health technologies are you most on the lookout for in the next three to five years?

Luke: [00:26:12] Yeah, I am most excited about, the growing sense that healthcare should be more patient-centered. That the experience of providing a great set of digital tools to patients is going to become more and more of a key differentiator. There's really no reason why healthcare cannot be more digitally enabled and digitally accessible to patients. I think when we realized that we start to remove a lot of barriers that today really prevent healthcare from being delivered. When we look at the populations that are most at need, when it comes to being recipients of care, they're often the hardest to get to. They are rural or they live in places that don't have infrastructure.

So for me, the, the biggest thing is - how do we provide care in a digitally enabled way where we really start to remove as much of the necessity to do it in person as possible. While it's fun and sexy to think about delivering that to the tech-enabled class of society, I'm most excited about how that enables the people who need healthcare the most and how we can drive healthcare there earlier, become more preventative, and ultimately help them live healthier lives. So that's what I'm most excited about.

Steve: [00:27:46] Well, that's a great note to end on. I appreciate you sharing that and, and really everything, throughout this conversation. So Luke as always, it's been fun. I know that I, and our listeners really appreciate you [00:28:00] sharing your perspectives on this topic.
So thanks for being with us today.

Luke: [00:28:05] Yeah, Steve, this has been fantastic. Thanks for inviting me on.