Fixing Healthcare Podcast Transcript
Interview with David Feinberg

Jeremy Corr:	Hello, and welcome to the Fixing Healthcare podcast. I am one of your hosts, Jeremy Corr. I'm also the host of the popular New Books in Medicine podcast and CEO of Executive Podcast Solutions. With me is Dr. Robert Pearl. For 18 years, Robert was the CEO of The Permanente Group, the nation's largest physician group. He is currently a Forbes contributor, a professor at both the Stanford University School of Medicine and Business, and author of the bestselling book Mistreated: Why We Think We're Getting Good Health Care—and Why We're Usually Wrong. His new book, Uncaring: How the Culture of Medicine Kills Doctors and Patients was published two months ago. All profits go to Doctors Without Borders. If you want more information on the book and a broad range of healthcare topics, you can go to his website RobertPearlMD.com. Together we host the biweekly podcast Coronavirus: The Truth
	Our guest today is Dr. David Feinberg, the newly appointed CEO of the electronic health record and laboratory system company Cerner. Prior to joining Cerner, David was the vice-president of Google Health. Prior to that, he was first the President and CEO of UCLA Health and then Geisinger Health.
Robert Pearl:	Hi, David, and welcome back to Fixing Healthcare.
David Feinberg:	Thanks Robbie. And I'm so excited to be back, because I guess we haven't fixed it since the last time we spoke.
Robert Pearl:	We had some great ideas in season one, but for whatever reason, the nation hasn't grasped onto all of them. So maybe now in your new job at Cerner, you be able to make the changes happen. As you remember when you were here the first time, we asked the interviewees to provide a big picture for how their ideas could repair our entire broken system, but as you point out, not much has happened since that time. In season six, we're hoping to take a deep dive into how each part of the healthcare system can serve as a solution to nation's unaffordable costs, lagging quality and growing inconvenience. As the new CEO of Cerner, and congratulations on that, how do you see your company fulfilling those promises?
David Feinberg:	Well, first of all, Robbie and Jeremy, it's great to be back. And I would say, if you would allow me, I would say it's more than just my company. I would say it's the industry. When we think of electronic health records, the bill of goods that we were all sold was this was going to solve a lot of problems. Now I think it's been a heroic lift to get everything digitized, but in doing so we created some new problems and we certainly haven't realized the promise that this was supposed to be, and the new problems are around usability. These things are not intuitive and easy to use, they're not adding a lot... I mean, they definitely fixed handwriting issues, but they haven't really fixed underlying problems of making

it easier to care for patients. And the real promise is the magic that we need to build on top to be able to make predictions to improve the lives of individuals, patients, families, and communities and as we saw in the pandemic, even the world. So I think we're poised now to do that and the company that I'm part of, Cerner, is totally committed to doing that, but there's a lot of work ahead of us and I would say, and you've made your career on this, we could only do this together. So we need other partners to make sure they're engaging with us on this journey.

Robert Pearl: Let me dive deep into that. Apple recognized that by opening its APIs, its application programming interfaces, the third-party developers could create apps and now, as you know, there's a half a million tools that people can use. I personally have seen the same opportunity for EHRs in which hospitals and medical groups could use the systems for the data acquisition and billing purposes required. But the information could be presented on handheld devices in ways that are far better for patients care and as you say, greater usability. Do you see Cerner doing this or do you see third party developers using the APIs inside Cerner accomplishing it?

David Feinberg: So yeah, I think our job, job number one is to make sure we have a reliable system, that it's usable and then particular to the United States, although we play globally, we got to get the bill out the right way. And as we do that, then we need to get the data and give it back in a way that our partners, these people on the frontline who are caring for patients, can use that data in a way that helps them achieve their mission. So yes, we need to get that data back and then it would be great if that data's in a way that the ecosystem, because each health needs something else, that the ecosystem could provide them. They may want to build some things on their own, they may want to use others. And some folks are trying to drive down cost and others are trying to manage populations.

David Feinberg: And we don't want, I don't want us to be the answer to all of that, I want us to be the foundation that creates the data and the platform so all of those things can happen. So my short answer to your question is, yes, we want to be the same way that Apple opened up its APIs. I couldn't think of anything more important than grandma's blood sugar. And I want to make sure that gets the right person is used in the right way is very, very easy so that she and everyone else with chronic illness and acute illness can be treated appropriately.

Jeremy Corr: And so this brings me to my next question, but what do you feel that EHRs like Cerner and others can do to be more in front of patients in terms of keeping them aware of their health and having it be a tool of communication between the patient and their doctor, maybe reminding them of when they need to make an appointment or even when to take their medicine, potentially monitor health, be a smart watch or advice on management of chronic conditions. Could it even be a preventable health tool to remind people to get exercise or teach them how to eat right while keeping the patient connected to their medical records? What are your thoughts on this? Where are we now and what would

be your dream software or app of the future to really tie the patient and provider and whole health together in a seamless and easy way?

David Feinberg: Yeah. So I don't think the answer is the app of the future. I think the answer is we want to help create that platform so you can have a bunch of apps because some people want to do that communication and some people still like to use the telephone and some people want to peruse their whole medical record and some just want to send it to their daughter. So I think our job at my organization is to help organize that data, combine it safely with disparate data sources, and then give it back to health systems and individuals so they can do what they want with it and create that ecosystem that's creating tools to allow you to do all those things you listed, but some people are going to want some tools and some are going to want others. And I don't want that to be my job because I think my job is hard enough of just organizing the records, keeping it safe and secure and teeing it up so others can then use and build products on top of it then you can then pick from.

Robert Pearl: Up to now, Epic and Cerner have been the two big gorillas battling from market share, one versus the other. Do you see that changing particularly in your vision from making all EHRs easier to use?

David Feinberg: Well, first of all, I said this really clearly to the board when they called me, my competition isn't Epic. My competition is heart disease and suicide and opiates being misused and preventable illnesses and COVID. And I'll do whatever's possible to beat that competition. I have tremendous respect for Epic. Look, I've been a customer of Cerner and Epic. I've used the systems. I've used Meditech, I've used Athena. And I would say none of us, none of us including, Cerner have built a tool that was really designed for the end user, where the nurse can easily figure out I's and O's, where the doctor can find your colonoscopy without having a hunt through PDFs that are OCRed into some system. And the other thing I said, I said this actually my first town hall here at Cerner, we have about 25,000 great associates.

David Feinberg: And I said when I was asked about this competition, I said, if my family gets admitted to a hospital and they're on a different system than Cerner, I want it to work. So I want all these systems to work. And if we really care about our communities, they need to work together. They should be in the background, or it should be in the foreground, our doctors, nurses, pharmacists, therapists, spending more time at the bedside and less time at the terminal. So the systems need to do the work for you, provide you the right information at the right time. And yeah, I hope they all work and I hope they work together.

Robert Pearl: But most likely if you're going to be admitted to a hospital you've had data sitting in the EHRs and the doctor's offices, you might have it in a different hospital across town. What's your vision for how we're going to make all this data available to the clinicians at the moment they have to provide care to the single one patient?

David Feinberg: Well, yeah, Robbie and your career was built on this too, that I view hospitalization and I'm exaggerating now as a failure of outpatient care and outpatient care is a failure of home care and home care fundamentally is a failure of loving our community. And if we loved our communities the right way, that question you just asked me about someone getting rid of the hospital, 50% of the time wouldn't even happen because people had access to good food, there was good transportation, a sense of purpose, we weren't shooting one another, right? So when we really go upstream, we can drive down the need for going to the doctor or even worse getting admitted to the hospital. But when you do get admitted to the hospital, the data is really dense. And what you need is data that can allow you to provide the right care, give you the right nudges and allow patients to get back home and back into the community.

David Feinberg: And what's missing in that data, although it's very dense, is a lot of that community data. So we're really proud of our Healthy Intent, which basically is our population health platform tool that's incorporating social determinants because those are so important. From my experience at Geisinger, when we said to diabetics, you need to have diet and exercise. If they couldn't get the good food, it didn't matter how many times we said diet. We actually saw the improvements when we started giving them food. And so that information needs to be available. When you really dig down at burnout, what does burnout among clinicians mean? It didn't really start with the EHR. The burnout was that same IV drug addict with a heart valve infected is back in the ER again with another valve infected. And the burnout out was we didn't give doctors and nurses the ability to get the right social intervention so these patients didn't keep coming back. It then shifted to being blaming the EHR, which I totally get. We need to really embrace those social determinants. And we think the data platforms like ours can help bring that information to the point of care. So not only are you getting all the information on the person's potassium, but you're also understanding how to use their social environment as a way to make sure they can and recuperate appropriately at home.

Robert Pearl: At the same time, the physicians say as they spend more time staring at a computer screen every day than they do looking at their patient. How is Cerner thinking about solving this difficulty for physician use? And I suspect some of the same is true for the nurses.

David Feinberg: Oh, I think it's actually worse for nurses. So we have spent a lot of time on that and have had some really early success just to call out a few places, Banner out in the Southwest, where we basic have come in and said, let's take a reset and look at the essential data set that the nurse needs for admission. And what had happened over the years partly because we were just putting in place the same workflows that we used on paper, we started collecting a lot of information that wasn't really essential for that nursing admission. And yet every admission we're making the nurses or the docs do all the click, click, click. And what we've seen is that we can literally say, I forget the exact number, but it was something like 90 million clicks and 900 hours. It was significant change by starting fresh, looking at the information that we're collecting and seeing where we can streamline.

The progress notes in the United States for patients are twice as long as the progress notes that they are in the rest of the world, even in the developed world, right?

David Feinberg: And so it's not like our patients are sicker, although a lot of doctors always like to say that, it just means that we've added documentation that I'm certain isn't adding value to care. It actually becomes so dense you can't even find what you're looking for if you're a consultant or a doc taking over a case. So we're really looking at how we can decrease it. So that to me is just table stakes because the real amazing way to decrease the workload is to start doing the sum of the work for you. So using ML and AI to help do autocomplete, to help write a template note for you, making sure that we incorporate voice, just so that docs don't have to go home and do pajama time where they're spending two hours finishing up for the day at home when they should be with the family. So we're very, very focused on that and also making sure that we listen to the clinicians in the community where we're deployed to hear, Hey, what's the biggest pain point so we can get it that first? Is it med reconciliation? Is it the problem list? Where are we causing you most aggravation so we can really at pulling that back?

Jeremy Corr: Do you see a future where patients will be able to have their medical records universally accessible, no matter where they go, what health system they go to? What are your thoughts on the... Sorry, what health system they go to or what EHR they're using? What are your thoughts on this? Is it possible? And how would we or should we get there?

David Feinberg: So I'd like to scream, but I don't know that that's appropriate on a podcast. Yes, yes, yes. That's exactly what we need to do, but it's actually more than that. So I could get you all your medical records now. Now, some we'd have to be able to sign up or open Epic or go to your health system to a Cerner portal. And then I'd go to your dentist and pay $15 and get copies of your X-rays. I mean, if you gave me about, I don't know, four or five weeks and a lot of money, I could go collect all your records. So now I'd say, hey Jeremy, you got your records right now. Obviously we need to make it simple with a push of a button, but all those records actually don't mean that much to you. What you want to do is to be able to use those records so you can find what you're looking for, get the right nudges, get the right information at the right time and share it with who you want to share it with.

David Feinberg: So yes, I think you will. Yes, you will get all your health information and yes, we need to give it to you in a way that makes it useful. Because I mean, in the old way, I could send you 14 charts of your information. That's not particularly useful. It wasn't even legible back then, right? So you want to know, what does this mean? What does this mean for me and my family? What does this mean about... Really, what you want to know is now that you got all your health information, what do you have to do so you don't miss your kids' graduation? That's really what people want. And yes, I think we need to get there and I think it's completely possible. I don't even think it's a stretch.

Robert Pearl:	When you speak about the opportunities through AI and machine learning, are you thinking that you're going to have virtual scribes built into the Cerner applications in the near future?
David Feinberg:	Yeah, I think it will happen for sure. Well, I wouldn't even call it a virtual scribe because a scribe is writing down what you're telling them to write. I think what I learned at my time at Google is that the machine learning not in a hundred percent, but definitely enough so that I can review it can write the progress note for me. I don't even need to talk. They should be able to capture the identifying data, the chief complaint, the medications, the family history. The machine learning and the AI, if we show the computer enough pictures of Labrador and retrievers, they can then identify one and then they can actually draw one. And we can do the same type of technology on medical records. If we show enough medical records, not only they can predict what's going to happen next, they should be able to, in essence, write your next progress note before you go to the doctor. Right now, it's not going to be perfect.
David Feinberg:	But then the human computer interface can say, "Oh yeah, this is actually pretty good. And here's where I need to tweak it." So there's no scribing there that's actually just do my work for me because the real work of the clinician is not being that scribe, whether it's virtual or actual, it's sitting with the patient and saying, "Okay, now that you got prostate cancer, there's three or four options we have. Let's really sit down and go through them," right? That's the part that's going to be hard to replace by the computer, but writing a 59 year old with urinary hesitancy and whatever Gleason stage can be done by somebody else or can be done by some thing else, not another body like another computer, right? That can be done and that way you can get back to doctoring and get away from being basically a data entry clerk.
Robert Pearl:	How will you blend that care delivery aspect of what the AI application needs to do with the documentation required for all the billing, for the functions that many of the EHRs were designed for in the first place?
David Feinberg:	Yeah. So I think it's a really important challenge. And first of all, we don't need, if we really took a step back, we don't need progress notes, right? These are just snapshots in time of what's going on with me. What I want as a patient is really a dashboard. How am I doing? And anyone who interacts with me should be tweaking my dashboard, should be updating my dashboard. I want a picture of my health. I don't want 500 either digital or paper records saying I came in to the office, here's what my temperature was. It's not actually very useful. But then your question is, well, that's how we get paid. I would say that's how we get paid currently. But as we work around the world and our work with the VA and our work with department of defense and places like Kaiser and Intermountain and Geisinger, these places that have really bought into the idea of integrating payment and delivery of care, your payment is actually just based on your membership, how many people you got, maybe it's risk adjusted, and then your ultimate payment is on your outcomes.

David Feinberg: Well, nowhere in there did it say you have to have this coded the right way, right? So how can we rethink this so that we're really giving patients what they need and decreasing the burden and driving more and more toward better outcomes. And although it's slow, I believe when we see the increase in Medicare Advantage and Medicaid, more commercial insurance fee for service is shrinking and integrated care is increasing. And as it continues to increase, it really gives us a way to rethink how we think about documentation in a way that I think would be way less burdensome and way more useful. And then you don't have to worry about did the bill capture everything so I can maximize the coding, right? And so when you talk about observe to spectrum mortality, it's an enumerator and denominator game. Like let's not let anyone die and then also let's on the denominator make sure we tell every and how sick they were. That's an interesting academic-financial exercise, but it's not really matters to my grandma. My grandma just wants great care. So I hope we continue to see the industry going in a way that, that documentation burden that you're asking your question becomes moot because we don't need that.

Robert Pearl: It sounds as though you're describing the Cerner EHR product as being very different than really almost anything else I can think of the marketplace now, that it actually will be an active participant in the care delivery. Is that your short term plan or is that something on the horizon?

David Feinberg: Short term, we've not been talking short term. Short term I got to make my EHR hum by it's reliable. I got to get rid of clicks. I got to get the billing right. And then I got to move the data and give the data back to the health systems. Nothing fancy there. I'm talking about, get back to basics. This organization, I think has done a lot of interesting projects that aren't core to our business. And that is in some ways, made our EHR not as usable as I'd like to see it or as reliable. So short term, very clear focus. We're going to be back to basics. We're going to make that EHR work way better, way easier, way more intuitive. The future state is with that data and that data normalization, and I don't think it's just our data. I think it's because people go to CVS and they go to Walmart and they go to places that have Epic or Athena, and they live in communities.

David Feinberg: I think it's capturing all of that data. And we want to be part of that where we then provide the information back to the heroes in this, which are the frontline caregivers or case managers or population health managers in a way that they can make actionable insights on it. So that's really teeing up the data in a way that makes it super easy for those users to interact with it. So to me, that's the future and I think we're well positioned to do that, but hey, we got to get first things first and that's there's still way too many pain points in our EHR.

Robert Pearl: So I don't know the exact balance, but when I think of Cerner, I think of it as both a major player in the laboratory testing equipment aspect of healthcare as well as the electronic health record. How do you see these two components of Cerner's portfolio intersecting?

David Feinberg: So we have the largest market share in the world of electronic health information. Behind Epic in the US, but worldwide, we have the most health data. And that is not only a privilege, I think there's a moral obligation to do right by it. So that's who we are. We're also, this is a blessing and a curse at the same time, we're very customizable. So because we were customizable, we came up with a lot of one-off solutions, which was great, but because we're customizable, it's difficult for us to upgrade the whole industry at once. It makes it pretty clunky. One of the areas, it was actually how we got started, was in laboratory. So when the founders of the company started, they actually started with the lab information system. It's one of our best products. And some organizations, their only Cerner interaction is with our lab. Memorials from Kettering is an example of that.

David Feinberg: And they love our labs situation. Our EHR doesn't serve their needs for our clinical side so they're just a lab customer. But we got a lot of those one offs. In some cases I think we can handle it, in some cases I think it's a little too much for us. And so we're rethinking about how do we be better partners where we can really deliver? Lab is not one on as an example, but are we doing other things that we probably should say, you know what, we should leave this to others.

Robert Pearl: So you've had a remarkable career. You were a leader at UCLA than the CEO in Geisinger and then the healthcare leader in Google and now Cerner. How have you decided to make these leaps from one very successful organization to the next?

David Feinberg: Robbie I think it's when I was at UCLA and I was a child psychiatrist, I am a child psychiatrist, when I was practicing child psychiatry at UCLA and they talked to me about an administrative role running a child outpatient psychiatry clinic that met two afternoons a week. I told my mom and she was disappointed. She said, "Well, that means you're going to have less time to see patients." And she'd like to send me her friends and grandkids with ADD and autism or whatever. And I said, "Mom, I think I provide really good care to patients. And if I take this administrative role on at UCLA, I'll be able to," I didn't use this word, but now I think of it, "I'd be able to scale that care to more people." Because I had four or five docs working with me and it was a training clinic. And I don't think I've changed at all.

David Feinberg: I think that's all I've done. So at UCLA I had the opportunity to run that organization where we did more organ transplants than any hospital in the United States, invented the pet scan, came up with Herceptin, diagnosed the first case of AIDS, US News & World number three. But to me, they were just all my patients and with a great team there really focused on patient satisfaction. It was just the same thing I was saying to my mom, these are my patients. Now, I didn't do the transplant, but I wanted to make sure they got information in the way they understood it. And then the Geisinger opportunity, I went there I would say selfishly, because I wanted to learn about the payer side. I wanted to learn the insurance business, which I did, but the blessing that I was not

expecting is what I learned there was what happens when you actually love your community.

David Feinberg: And this is a part of the country where people don't move and there's not a lot of competition so these are our people. And at Geisinger that's what I learned is about really what does community mean? And then we had a lot of data there and Google came, other tech companies came, I got to know those folks. They said, come run Google Health. I was nervous that I'd have to sacrifice my values and Google wasn't serious. Having spent three years at Google, these are some of the most mission-driven people that I've ever met in a lot of cases, more mission driven than those I knew from the not-for-profit world. But when Cerner called it was this sense of I'm at a tech company at Google, albeit an amazing tech company, that's putting its toe in the water in health and Cerner is a healthcare company using tech.

David Feinberg: And I think that, for me, back to how do you scale? Well, we got these great Cerner associates that work all around the world and they're trusted by these healthcare providers. And we got all this healthcare data and it's this inflection point right now in healthcare. What if we got that right? I think I could help you. I could say to my mom, I helped even more patients. So that's been the journey. I've been here now a couple of months, I feel like I've come home. I'm really comfortable at the nursing station and been able to spend a lot of time doing so as I've been visiting our customers and saying, Hey, does this work, does that work? How can we make it better? Because really what I want to do is to make sure that everyone in the world gets care that's safe, that's equitable, that's cost effective, that's dignified, that's culturally sensitive. I just want to get that care. I believe I was providing that care when I was seeing patients. I want everyone to get that care. So that's been the journey.

Robert Pearl: Google is the world's largest content provider and over the course of the past decade or so I've followed it very closely, they seem to dip their toes into the water and pull them back at out. How do you view Google's successes and the challenges when it comes to medicine?

David Feinberg: Yeah. So the Google message to me was pretty clear. Go take a bunch of people and create a product that has billions of users. And I've never been surrounded in my entire career, and I've worked at great places, by more 'A' players. Google has won the war on talent. Everybody there is a star and it was an amazing opportunity and also a huge sense of imposter syndrome because you're surrounded by just people, every single one that could run circles around me. And what I started to think about there was, well, I get we could build products that could potentially have the effect, like some of the Google products like Android or Maps or YouTube or search, but what if we just made health better on those platforms that already exist? And that's what Google has continued to do since I left, which I'm so proud of.

David Feinberg: So we have a team there led by Karen DeSalvo who's making sure that everything that's done at Google on those platforms is clinically informed. When

I was there, our COVID information page had 500 billion impressions. So back to my mom, hey, that's a lot of people that we got good info out to. Actually that's the whole world when you think about it. And Google has continued to work on their amazing technology about how could you bring things like computer vision and organizing disparate data sets and making data useful into healthcare specifically. So I would say that it's not really fair to say Google has just dipped its toe in the water. Seven percent of Google searches and it was more during COVID are health related. So everybody goes to Google when they have a new diagnosis, a new medication. And clinicians, as much as often time they would say don't go to Google. And I think that's dated now because I think you get better information. Clinicians all the time go to YouTube before they take out your thyroid.

David Feinberg: So where you and I would walk around with that little wash manual in our pocket, people are going to YouTube, clinicians, to just brush up on the procedure they're about to do. So there's real pressure on Google to make sure that that information is authoritative and up to date. And I think the teams there have done great work in making that happen.

Robert Pearl: Well, I concur with you, David. Residents today don't go to textbooks. They look at Google, they go to YouTube, they watch five different surgeons doing a procedure before they try to do it. It's a far better way to learn. And when they're sitting in a situation facing a patient, they're not quite sure what's happening. Resident was telling me that she was in the operating room and after a surgery, the vocal cords were coming to together in the middle obstructing speech, obstructing breathing. And that she immediately Googled information, saw a case report, saw that it takes 30 minutes to resolve rather than putting the patient in the ICU was able to sit there for 30 minutes, let the patient go home. We could never have done that in the past. The content is remarkable and has massive medical implications. I'm just looking for opportunities of the big companies around the nation, around the world, to be able to translate that into the type of tools that you've described, the ones that patients can use to change their life, not just get inform about their life.

David Feinberg: Yeah, I think it's going to be a combo. I think it's going to be some of the big tech companies and some of the incumbents in healthcare realizing they got to do it together because for us, for example, we have the data, we have the trusted relationships. If you combined us with, and you can go through the list of Amazon or Microsoft, Oracle, Google, whoever, they have other expertise that when you bring it together could really get to that promise of what I think we all thought the electronic health record was supposed to do.

Robert Pearl: Do you see any of these companies creating their own system that they would then put into place in the various areas, which they now are gaining increasingly control? Whether it's Amazon with Amazon pharmacy, with Amazon virtual care, with Amazon onsite care, do you see them trying to lead the process or do you think they'll be dependent upon the Cerner's and other EHR companies in the world?

David Feinberg: I think it'll be a combo. I think you'll see some trying on their own, right? We saw Amazon and Berkshire Hathaway and JP Morgan try it. And Amazon continues to make moves that I think are smart. I think there's other potentials like the retailers. You can't count out Walmart and Dollar General and the CVS and Walgreens and it's just needed. So I hope the market responds in a way that makes it easier for docs and nurses to take care of patients and for individuals to get the health information they need, share it at the right time, get the right nudges. So none of us have done it. I keep saying, this is a thing that you got to do together. So I'm big onto those partnerships of what we can bring. Now, obviously the partnership makes it a little more complicated, but I can tell you having been able to see healthcare in this privileged way that I've seen from different places, there's just core competencies that we have that I didn't see at Google and vice versa.

Robert Pearl: As you know, in December of 2019, the federal government said that healthcare costs would rise five to 6% a year for the next decade. That means by 2030, we'll be spending 2.5 trillion more dollars than today, or 6 trillion annually in total. How do you see Cerner helping to lower that figure while improving clinical quality?

David Feinberg: Yeah. Well, the figure has to lower because if you don't, we can't build roads and schools and people won't get wage increases and we'll see a further gap between those that have, and those who don't. I think it's been the biggest crime in healthcare that we've allowed us, those of us in healthcare, that we've allowed this to happen. I think the way we can help, I mean, I think you've seen it in other industry, is the technology particularly using data to make better decisions around care is the way we can help the most. So, hey, we're expensive to put in. We got to prove that not only are we easy to use, which we're not yet, but not only are we easy to use by using our tools, you're able to care for more people, you're able to drop the cost of your care, you're able to make sure that nurses that are so expensive and so hard to get right now are just doing nursing and not worrying about working in an EHR as a data clerk. So that's how I think we can join this solution and we're totally committed to it.

Robert Pearl: You mentioned COVID-19 earlier. What has been its impact from your perspective on healthcare overall and medical technology, more specifically?

David Feinberg: So, I think for me, COVID gave me two important lessons, before I get to the technology piece. And the one was, and we knew this, but I think COVID showed, we meaning those of us in healthcare, showed the rest of the world how inequitable care was. That we saw people of color dying at two to three times, the rate of white people is stuff we knew and just put it out for the world to see. And so shame on us and we have to put equity at the very top of what we're doing. So that was one. And then the other more personally was, and I said this at the beginning, I said this is going to be a mental health crisis like we've never seen. Humans by their very nature are designed to be together and a situation where social distancing leads to emotional distancing is dramatically affecting on people and as a child psychiatrist, particularly on kids.

David Feinberg: So I know that kids get picked up and identified for sexual or physical abuse by teachers and soccer coaches and stuff like that. If you have kids at home, they're not only not going to get picked up, but particular parents that are having difficulties because they lost their job or because of COVID are going to be at higher risk of actually abusing kids. I've always said that pediatricians have done such a better job than child psychiatrists, where pediatricians said, hey, wear bike helmets and wear seat belts. We know the bike helmets and seat belts of child psychiatry, but we've never been very vocal about what they are. And COVID to me was a perfect kindling of those high risk factors. So we've seen it. I mean, we've just seen the outcomes now and I think we will see this for the rest of our lives.

David Feinberg: I think little kids that for two years have been wearing masks and told, stay away from people and don't touch this and that and not being able to read facial expressions, while I agree with it a hundred percent from a medical standpoint, doesn't go away when you take the mask off, right? You have different pathways in your brain about how you engage with people. You watch little kids now walk and when they see somebody, they oftentimes move away and don't walk right next to them. That will be with that child forever. It's a different imprinting on how you're supposed to interact with other humans. And then from a technology standpoint, I think it showed us in the United States, we have zero public health that's been totally unfunded and not coordinated. And Cerner and others, I would say Google, Epic, a lot of folks I think stepped up and used technology to help health systems open up hospitals help find vaccines, help get people the right information at the right time.

David Feinberg: So I think tech was a blessing in this, but it just laid bare how bad our public health is and how underfunded it is and yet how important it is. We knew it was important before COVID. I mean, I call diabetes and high blood pressure foodborne illnesses. Like these are public health issues and yet it's just not prioritized.

Robert Pearl: David, I love having you on this show because you really stimulate my mind. And I had never thought till this interview of AI being inside an EHR, but it sounds like you're seriously considering that. We have the opportunity to have virtual conversations using AI. There are applications that exist right now that one can access. We have robots that can look like doctors. We have data analytics that can come to conclusions. How far do you see this replacement of human beings happening with the combination of the EHR information that you have, wearable devices coming into the systems and AI doing an analysis and communicating back directly to patients not through physicians?

David Feinberg: Yeah. I think that last part is where I draw the line. So I think if you're a radiologist and you don't embrace AI, you're not going to be a radiologist, but I don't think AI is going to replace radiologists. So computer vision is spectacular. You can make better decisions if you just looked at 10 million cases than if you've seen of 10,000 and you don't have the same biases that humans have. And I think many have shown that we can improve accuracy in diabetic

retinopathy, in dermatology and colonoscopy, in mammography by using AI. But it is clearly not perfect. And usually the best results come when you combine human with the computer. And so I do think that's coming. I think it should come really fast. Now, when we do, we got to be super careful because there's biases built in the data sets and we don't want to go back to that comments earlier around equity.

David Feinberg: We don't want to make the inequities worse. It doesn't work in all settings, but you almost think that this AI could come out with a package of food that has the label on the back and tells you this, this and this. And so the AI should come out and say, this works in this setting, be careful in this kind of setting and don't use it in this setting. But to not use it all together, I know is a way to decrease quality because quality will increase using computer vision for example, to improve diagnostic accuracy. It doesn't know how to hold a patient's hand. It doesn't know how to say this is what the scan said, but the real decision is, do you want more treatment or do you want to go home to die, right? Those are very, very human discussions and the computers that I've seen don't do that yet.

Robert Pearl: What advice do you have for individuals who are interested in becoming healthcare entrepreneurs?

David Feinberg: Listen to what's going on out there, solve some needs, be humble and take some risks.

Jeremy Corr: Robbie and I discussed this the other day and it's something I want to ask you about too. You always hear in the news about cybersecurity breaches and health systems. And I have a friend that owns a cybersecurity firm and he's told me that the amount of hacked medical records for sale on the dark web is just mind blowing and that a lot of the ransomware attacks that happen never get reported just for the fact that the health system wants to quietly get rid of it without any of the bad press or losing patients over it, so they just pay the ransom. What do you think is the future of patient medical records security? Is the blockchain the answer? What do you see happening in that space?

David Feinberg: Jeremy, I'm not an expert in this one so I want to be super careful because I'm not totally well versed in this. My understanding is the reason that medical records are so valuable to the bad actors out there is not because they actually want to see my cholesterol level, but they can create a patient out of me and can do billing and frauds on billing. So that's why they're so... I think credit card information sells, and I'm making it up, but I think these numbers are right, for a dollar on the dark web, but a medical record sells for $50 because they can then do billing against it. It's not really like they're really looking at your medical stuff out of curiosity.

David Feinberg: So they are valuable in that regard to bad actors. So the security around it has to be top notch. Now, as somebody's been in healthcare a long time and I dealt with privacy issues with Britney Spears and Farrah Fawcett and Maria Strive

right when I started at UCLA, that we had an employee that was selling that information to the National Enquirer and it led to a lot of the HIPAA legislation. So I've been living this one personally. A lot of times it's people beyond just the technology. So you can have all kinds of locks on the door, but people still figure how to get in. And I'm definitely not an expert on blockchain, but what I do know about it is that that may be a better lock. But even with the best locks or the best prevention, bad people figure out ways to do bad things. So I think we just have to be super vigilant and stay ahead of the game and at the same time expect breaches are going to happen, unfortunately.

Robert Pearl: The last question for you. A decade from now, how do you see the American healthcare system and the role that Cerner will be playing?

David Feinberg: A decade from now I hope Cerner is seen as the foundation of data that is allowing doctors and nurses, families to be able to access data to better care for themselves. And I hope that that leads to a healthcare system that is much more equitable, much more cost effective, much more easier, and convenient and more dignified. And that everybody is applying to nursing school and medical school.

Jeremy Corr: We hope you enjoyed this podcast and will tell your friends and colleagues about it. If you want more information on physician culture, you can find it at RobertPearlMD.com. Congratulations Robbie on the success of your recent book. I know it will stimulate discussion and debate and improve healthcare for all Americans. Please subscribe to Fixing Healthcare on iTunes or other podcast software. If you liked the show, please rate it five stars and leave a review. Visit our website at fixinghealthcarepodcast.com. Follow us on LinkedIn, Facebook, and Twitter @FixingHCPodcast. Thank you for listening to Fixing Healthcare with Dr. Robert Pearl and Jeremy Corr. Have a great day.