HEALTHCARE INDUSTRY GROUP

What's Your Moonshot? A Podcast Series Where World-Class Healthcare Leaders Seek To Solve Big Problems

UC Davis Health is Leveraging Technology and Innovation to Propel Healthcare into the Future

Transcript

[00:00:00] David Lubarsky, M.D., MBA: We want to welcome all the care that we're uniquely capable of giving and partner with others and prescribe applications. We're building an actual application formulary to reach that goal of connecting patients to personalized medicine via a digital interface that we may not control, but that we have checked out, we have endorsed, and we may augment the customer support that the company provides so that our patients can use that electronic application to better their health with our help, not instead of us, not in spite of us, not on the side of us, but in league with us.

[00:01:00] David Shulkin, M.D.: Welcome to the Alvarez & Marsal's, What's Your Moonshot? Podcast. We're excited to be here today for another great podcast. My name is David Shulkin, and I'm pleased to be the host today. It's my pleasure to welcome to the podcast the Vice Chancellor of Human Health Services and the Chief Executive Officer of the University of California, Davis, Dr. David Lubarsky.

David joined the University of California in July of 2018. He came all the way from Florida to move to California. When he got there, his job is really to oversee the entire financial structure, academic research, and clinical programs. I'm sure most people know that UC Davis Health has been ranked in the top 30 nationally for medical research, is a major contributor to the health and economy of the Sacramento region, and has 16,000 employees, 1,000 physicians that see over a million annual outpatient visits, and let's not forget, does a great job in training over 1,000 student graduate medical trainees and its revenue is now \$4 billion. It's a pleasure, David, to welcome you to our podcast today.

[00:02:16] Dr. Lubarsky: Thank you, David, and always a great opportunity to chat with you. I really, really appreciate the invitation.

[00:02:23] David: Great, thanks. Today we're going to be focusing a lot on innovation and technology and the way that that changes the way that healthcare can be delivered. It seems pretty obvious coming out of the pandemic with a rapid adoption of technology that really has changed our industry probably forever, but tell us a little bit about your experience with technology. I know that's not necessarily what you trained in, but watching you over the past couple of years, I think you've become rapidly proficient in understanding how to use technology. How are you thinking about technology? Why are you spending so much time thinking about this?

[00:03:12] Dr. Lubarsky: Actually, this does go back quite a number of years. Where I first trained at Duke University, my mentor, Joey Reeves, who was the chair of the department at the time was an early adopter of the Archive Intraoperative Medical Record. I was a neanderthal and resisted it in every possible way. Then pretty soon became a convert. I actually published a bunch of papers using the-- Big data wasn't that big back then, but the immense amount of data that we had to help direct more appropriate therapies at least in the operating room.



Actually, I wrote the programming for an entire intraoperative medical record back in the '90s, so do have a little bit of background and never realized its potential, of course, because the things that we're really seeking around interconnectivity, interoperability, clean data within your databases and the ability to analyze those in real time have really only come about recently.

The pandemic, if you look for a silver lining, it's a catalyst by crisis, if you will. All of a sudden we had patients who didn't want to come to the office but still needed good healthcare. We had physicians who didn't want to be exposed to patients who might be carrying a terribly infectious disease, and we had the payers and the government saying, "Yes, actually, it's a good idea for you to still provide care even if you're not physically seeing the patient." It really catapulted us into a different way of thinking about how to provide care with a digital interface.

[00:04:47] David: I think that's really interesting knowing now your original experience with technology with the electronic health record, you saw how, essentially, the industry moved towards that kicking and screaming. It really wasn't until the financial tie towards billing and also the government moves that pulled us into that. Then you talk about the crisis of the pandemic really being that catalyst that propelled us into technology.

When you're thinking about future adoption of technology, do you think it's going to take as long as it did with the EMR, or do you think it's going to be another crisis that's going to just continue to propel us into that, or do you think people have learned that it probably makes sense to adopt technology?

[00:05:37] Dr. Lubarsky: Healthcare is really the last frontier, the last bastion of inefficient labor utilization. It's 20% of our economy, but it's the only part of our economy that has not undergone not only a digital revolution but really a rethinking of the way that services are delivered. I don't think it's going to be very long. I think that the amount of money that is floating around and inefficiently utilized is why organizations like CVS and Walmart and Amazon and Walgreens are all racing to provide digitally enhanced experiences, along with on the ground experiences at least at the front door to healthcare. I think that that's going to propel us to have to really figure this out.

I had a really interesting panel discussion with Kristen Helton on a conference that UC Davis held, whose brainchild Amazon Care was, and when I said, "Well, how do existing health systems interact with you?" She was really clear, she said, "We want data on your outcomes, we want data on which physicians are well rated by your patients. We want to know all about your access availability."

All that is real time data that could be shared that nobody is currently really sharing, but we're going to be pushed to do that. When we start to do that, then the door begins to open up about how digitally enhanced care really can make us not only more efficient, but believe it or not, might make physicians equally or even better compensated than they are now. That also is an important part of this because people resist things that impact their salary.

I'd like to point out one thing that, say, our organization did during the pandemic. Again, in an effort to cut down the number of in-person visits, we set up a mandatory eConsult from our primary care physicians to our dermatology department, which was always inundated with too many requests, and 50% of the referrals disappeared. The other 50% actually needed to have something done like a biopsy or something like that.

The physicians were being used at the top of their license, the patients were being better served. There was more efficient and infinitely more timely care because oftentimes they'd have a read on their rash, if you will, before they even left the office. Everybody was so



much better served. I think that's an example of what happens when you rethink what your purpose is. It's not to get referrals, of course. It is to actually dispatch the correct advice and the best care, and that goes back to the value-based paradigm.

The only way that this is really going to work then it will really propel us into the future is when people are assigned a population of human beings for whom not only their health but their wellness and their WellSpan define the levels of reimbursement that they get that is good work should attend good funding, it's not the way things are. Right now practice follows best funding as opposed to funding following best practices. We really have to turn that on its head to a certain degree to achieve the goal of really employing digital technologies to their fullest.

[00:08:53] David: Before we get into your moonshot, I just have to follow up on what you said, David. I think you gave a really good example of almost out of necessity what your primary care doctors and your dermatologists did in the eConsult model where 50% went away and the other 50% that remained really leveraged your dermatologists. I wonder what you think now that the pandemic is easing and what we're seeing around the country is that people are going back to their old practices, where do you think that's going to settle out of UC Davis? Do you think they're going to continue at that 50/50 level or you think they're going to slide backwards?

[00:09:38] Dr. Lubarsky: They're going to slide backwards. The reason for that is we have a funds flow model that rewards work. It's important to have that, but that's because we don't actually have gigantic populations in the way that Kaiser does. Kaiser has this pretty well figured out where they're both the insurance company and the provider. If they can avoid delivering care but still maintain health, that makes perfect sense in their model. We really need to all get closer to that model.

Right now our virtual care experiences and our physician-to-physician eConsults, they're running in about 15% to 20%. We're targeting this year 19% to 20%. We have maintained it. It used to be less than 1%. That's still a pretty big change. Could we do more? We absolutely could. I think it makes sense, especially for those common procedures. I'm trying to convince us to work on triage models for things like back pain where honestly a whole bunch of people come in to see doctors and they generate all sorts of tests and extra visits when in point of fact, you can probably rule out the need to see a neurosurgeon right upfront and stop wasting the neurosurgeons time.

You can do that digitally by getting an outlying X-ray or MRI somewhere and transmitting the picture digitally, and triage whether or not that person has a lesion that does require the intervention of an actual surgeon, and all the other costs that attend a visit that may or may not be necessary and whether ongoing symptoms or changes in symptoms dictate an additional visit.

We don't do any of that. The idea of really doing where the car industry has gone, it used to be something broke, you came in and you fixed it, that's where we are. Then in the '70s, '80s, '90s preventive maintenance came into place where you came in every 5,000 for your oil and your transmission fluid and they checked your tires, but a lot of that was unnecessary.

I have a Tesla, so I'm going to give credit to Elon Musk. Now, a computer monitors every single function in my car, and I never take it into the shop unless I need to, because condition monitoring is what's taking place. That goes back to the moonshot, which is, how do we get to the point where we're doing condition monitoring so that nobody gets seen unless they actually have something they need to have done?



[00:12:00] David: All right. I think you've gotten our listeners pretty intrigued as to what your moonshot's going to be because what they've gotten from you is, you're clearly somebody who looks to outside industry for what they've done. You have vision, but being a doctor yourself, you have a healthy dose of reality. You understand what's likely to happen, and what it's going to take to create change so that when you develop a moonshot, I think my sense is, is that you're going to be looking to the future, but reality-based. Let's talk about your moonshot. What are you actually hoping to accomplish and how do you plan on getting there?

[00:12:45] Dr. Lubarsky: I think the answer is to really take advantage of the movement in our own economy, which is, although not all-inclusive is about the Internet of Things, interconnectivity, interoperability, the collection of big data, and the application of artificial intelligence or machine learning, if you will, to those patterns that can't be deduced by the human eye or take too long to be understood by the human eye. Right now we're really focused on diseases.

Recently, I actually had to have a Holter monitor placed on me, a little itsy bitsy dot of a metal device monitored 1.5 million heartbeats. Literally, when I sent it into the company, within less than a day they had analyzed all 1.5 million heartbeats and told me I had four aberrant beats that were picked up. It's amazing that they could know that and do that but imagine if-- I'm also working, not me personally, the UC Davis is partnering with a company called BioIntelliSense, which now has that exact same methodology not only in real-time analysis, but can look at balance and gait, and pulse oximetry, and breath sounds, and your heartbeat, and all sorts of other stuff that really is about condition monitoring. It's like the Tesla of the human body.

The idea is not only can you be monitored, if you will, during a period of illness, but you can be monitored for your ongoing health. You can detect and note when there's a deterioration so that you have a digitally enhanced, if you will, health coach telling you what to do and when to do it. I have a body plethysmography scalp, not because I have congestive heart failure but because I'm thin.

I want to know what my body fat percentage is, and my body water and make sure I'm in prime condition for athletics, but there are a lot of people out there where their weight is really critically important, especially those with congestive heart failure who have fluctuations in weight based on body water composition, where there's no reason there can't be real-time interactions with something that's as simple as a scale, frankly, in order to help coach people in a way that monitors their condition, suggest changes to either their diet, their exercise, or their medication levels in a way that prevents them from ever having to see a physician. They have moment-to-moment, if you will, or day-to-day advice from algorithms that are developed and tested and endorsed by expert physicians.

I always want to mention the physician is always at the center of whatever digital enhancement we're providing to patients. As soon as you try and eliminate them, and some big companies have failed there, then you're going to fail on your moonshot. The idea is, how do you integrate the existing experts and the existing infrastructure, if you will, so that they are used to their maximum impact and patients get even better care because the smaller stuff is easier to access and more readily available through technology where eliminating inequities in access, eliminating inequities in geography you're able to really get at people's health and ongoing wellness through this continual digital interaction?

[00:16:15] David: David, I think I get it. This moonshot really is to be able to be the equivalent of the Tesla computer monitoring the human body, trying to say when people need to have a potential intervention, how they could even perform at higher levels. How



does that change the way that an academic health center like UC Davis looks and how does it change the way that physicians think about their job?

You've talked about this, they're involved, but do physicians no longer need to be involved in diagnosis? Does the academic health center, is it responsible for the monitoring service as well or does it just wait until a company like BioIntelliSense tells them? They call you up and say, "We think you need to see somebody?" What role do you see the academic center playing in this new future?

[00:17:15] Dr. Lubarsky: I really do believe that the hospital of the future, especially the academic medical center of the future, will be focused on an increasingly narrow segment of the population that requires care. That segment will be those who have large physiologic trespass, trauma, a giant operation, something like that. Or where there's incredibly complex or expensive technology that's required to aid in a diagnosis or aid in a treatment such as radiation therapy, or where the accumulation of expertise cannot be found as easily virtually. That is, you need a bunch of coordinated care from a variety of different sub-specialists concurrently, or you need moment-to-moment monitoring, and you need a real healthcare professional to be able to intervene during that moment-to-moment monitoring.

To that, and just for the record, we're building a new tower, the most expensive building project in the US, \$3.7 billion. When we're done 350 of our 700 beds will be ICU beds. We'll have attached give or take when we're done with our ambulatory center, et cetera, about 60 operating rooms to service that. We're really thinking 10 years from now that we will be partnering and we won't be seeing a lot of the minor things that we currently see. We're trying to prepare for that world because I believe that we'll continue to get less and less invasive, things will be more and more in the outpatient arena. We're really tripling down, not even doubling down, on cell and gene therapy and regenerative medicine that really cures you from the inside out by changing your genetic frailties or otherwise enhancing your abilities to cure your own disease in the way that CAR T-cells do.

We're really excited about that and we're not worried about it. We're saying though, now we no longer can be the castle on the hill, pull up the drawbridge, dig the moat, put the alligators in the moat, you're lucky if you can get in and see us. We want to welcome all the care that we're uniquely capable of giving and partner with others and prescribe applications.

We're building an actual application formulary to reach that goal of connecting patients to personalized medicine via a digital interface that we may not control, but that we have checked out, we have endorsed, and we may augment the customer support that the company provides so that our patients can use that electronic application to better their health with our help, not instead of us, not in spite of us, not on the side of us, but in league with us.

[00:20:07] David: You've talked about the future of the academic center and your tower being largely ICU beds. Is that in part because you envision your typical med surge bed today being replaced with the ability to monitor patients in their homes and to essentially be able to take care of those more minor and moderate issues outside the hospital by monitoring people and allowing them to remain at home?

[00:20:42] Dr. Lubarsky: That's exactly right, David. My view, if you will, if where we're going to go, we're going to have a sliding scale of acuity-based facilities, community hospitals will really be more about waystations, if you will, back down from the treasury care centers because we don't have a lot to offer once someone no longer needs that intensive care level experience.



Frankly, with digital enhancements and doctor-to-doctor consultations we've already proven during this pandemic that we can help community hospitals better manage sicker patients within their four walls. We're really thinking exactly that. Then they'll go from there back home and that will be a really great thing because really patients do better recovering at home, less hospital-based infections, less sleep deprivation, more love, and more care from people who love and care for them. Those are all good things that promote healing and wellness.

[00:21:43] David: Well look, I think this is a very compelling vision, a very compelling moonshot and I'm a believer. I still am using the playlist that you gave me off of your favorite Netflix and Prime video shows that you watch. I keep that list on my refrigerator, my wife and I turn to the Lebarsky list on what to watch next. I'm a believer, but you're on your journey. I would imagine even you would imagine you're at the beginning of this journey. I just wonder what lessons some of our listeners who are leaders in healthcare might think about if they begin to start approaching their own journey in this digital transformation, this automated digital health monitoring coach? What advice do you have to get more involved, and to learn about this, and think about planning an initiative like this?

[00:22:43] Dr. Lubarsky: One of my favorite authors was Clay Christensen, recently departed. One of the things that he said, which really stuck with me as I was developing my own sense of business on this side of medicine, was that you cannot analyze your business from the perspective of, "Oh, I can make more money if they come into the hospital facility versus providing this in a digital format. You have to approach it from, who will make some money from providing something in a digital format. If there's a profit motive there, they're going to undercut you. It's better if you undercut yourself."

I don't know if I've coined the term of constructive cannibalism, but that is what I am doing. I am eating my own business and my goal to my ambulatory group is to strip everything outside of our hospital that can be stripped, not because we'll make more money, we'll make less, but we'll make more money in perpetuity because somebody else won't do it. Now I have told both my ambulatory and my hospital division to get ready, because the new chief digital health officer, Dr. Ashish Atreja, that I've appointed who's building a, literally, virtual entire medical enterprise to do everything humanly possible to strip out of both the ambulatory and the hospital what can be stripped because if you do that to yourself, you will never be surprised and you'll never be caught flatfooted. If you don't, someone will come and insert themselves and they will do it to you.

I can only encourage those who are rooted in the traditional model to think carefully about not whether it would be best for the organization to do it slightly differently but is anybody thinking that they will be able to upset the applecart by coming in and doing it differently and beat them to the punch and maintain the fact that an entire ecosystem of healthcare run by existing health systems is really, in my opinion, the best care that can be delivered to patients.

[00:24:42] David: Let me ask you on that advice because I think that's just terrific advice, but it's going to be hard for people to really embrace this self-induced cannibalism. Are you thinking, and is your advice to try to take on that process yourself or do you go and work with these disruptive companies that you think are ultimately going to be the ones that are going to eat your clock? Do you invite them into the tent now to try to work with them?

[00:25:15] Dr. Lubarsky: Yes. 100%. You can't be everything. You can't do everything. To be quite honest, especially working for a state organization, nimbleness is not our byword. When you're talking about tech and the rapid changes, we have an incredibly well-established place in the Northern California healthcare ecosystem. We're lucky we can afford, and when I say afford, meaning we're not going to be displaced from that perch. How



do we provide better care? It's through partnership and aggressive partnerships to help these tech companies early on prove their value proposition on behalf of patients and healthcare.

There's a lot of advances to be made in WellSpan and keeping people healthy and keeping them optimally functional well into their senior years. We can do more and we need partners in order to be able to do that. Right now we're great at addressing disease, but we're not so good at healthy living. We need partners to help us do that.

[00:26:16] David: Well, Dr. Lebarsky, thank you. I think this is a really exciting direction and I think that our future leaders really need to begin to start thinking this way because I think you and I would both agree this is going to happen whether we want it or not. There's just too much out there right now moving too quickly for a healthcare leader to have their head in the sand. You've painted a future that I think is exciting for medicine, is exciting for patients, it's value-based. Can't thank you enough for joining us on What's Your Moonshot?

[00:26:55] Dr. Lubarsky: Thank you so much for inviting me and giving us some time to talk about it. To me, the future's incredibly exciting and something to be embraced not feared.

ABOUT ALVAREZ & MARSAL

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