

ReQuestEd Podcast

Dr. David Svec Interview Transcript

Interviewer: Gina Bonanno

Director: Rick Stulen

Sound Engineer and Editor: Caleb Cheung

Music: Summer by Bensound

Gina: Hi I'm Gina Bonano and welcome to ReQuestEd. This is another in a series of brief interviews with Bay Area leaders in science, technology and medicine whose work impacts our everyday lives.

Quest Science Center's mission is to inspire and nurture everyday exploration and to encourage a lifelong engagement with science and technology. Today we're very pleased to be talking with Dr David Svec, Stanford Healthcare Valley Care's Chief Medical Officer who will be discussing Stanford Health Care. We'll be asking him to reflect on the Covid -19 experience so far as seen from Stanford's perspective and what it might mean for the future of healthcare.

David received his MD as well as MBA from Case Western Reserve University in 2009. He did his residency at Stanford in 2012 and was board certified in internal medicine in that same year. David became Stanford Health Care Valley Care's chief medical officer in 2017. Welcome David and thanks so much for being with us today.

David: Thank you Gina for allowing me to join ReQuestEd.

Gina: My first question is what does a chief medical officer do?

David: A chief medical officer oversees a lot of the quality and patient safety items inside of a hospital. We look at aggregate patient data and make sure that every patient that comes in gets the best experience.

Gina: What does your typical day look like?

David: On a typical day, the chief medical officer reviews all of the aggregate patient data and makes sure that the processes the hospital is following are correct and providing for patient safety. We also look to be sure that metrics are being monitored for infection control practices and are being followed.

Gina: It's been about five years since Stanford Healthcare came to the Tri-valley region through its merger with Valley Care. By now you've had a chance to get your feet on the ground and you probably understand our region in ways you might not have five years ago. At the general level tell us about the transition to the Tri valley region, how that's gone, perhaps some of your accomplishments so far and a glimpse of your priorities for the future.

David: At Stanford Health Care Valley Care we have been able to achieve a couple different aspects of Stanford's overall mission. There are three different components of Stanford's mission which are excellence in clinical care, excellence in research and education.

Over the past five years we've really pushed hard to make sure that there is excellence in clinical care and we've been recognized recently by a couple of different awards such as the CMS five star rating and the Leapfrog Grade A rating. In research we've been pushing the boundaries and we recently were enrolling patients in the National Institute of Health ACT trials which we can talk about later and then lastly we've had a substantial focus on education. We've started education programs not only in graduate medical education but also for local area students.

Gina: We're only about five months into the COVID-19 pandemic even though for most of us that feels like five years. I suspect that feeling is even more intense within the hospital community. Would you talk a little bit about what the early days from mid-February through the end of March were like for you in your role as the chief medical officer? What was going on in your hospital, how did you and your team prepare for something that we really didn't know much about?

David: We actually started looking at all the protocols in early February. Our infection control team initiated an emerging infectious disease task force and brought together a whole part of Sanford Health Care-Valley Cares teams. It included individuals from an infection prevention and control team, our nursing teams, our interventional services, and our medical staff, materials management to make sure that we had a good response plan to what was soon to become COVID-19.

We also started working with Stanford University to start looking at different modeling options to figure out what the different patients surges could look like. We looked at variables that included bed data, ventilators, the doubling time of viruses and also county specific data. In the early days, we started a substantial amount of surge planning. We looked at all of our supplies. We looked at our physician components. We looked at our staffing from a hospital perspective and we also looked at items like telemedicine to see how we can best provide patient care to patients that may become infected. Lastly we looked at testing. Testing has become a really important component of COVID-19. We looked at options that could provide not only rapid tests but also the best tests including PCR.

Gina: So at the hospital had you previously done scenario planning around pandemic possibilities?

David: We definitely have and we've looked at it from not only the ebola virus when that was coming out but also other SARS types viruses and definitely COVID-19.

Gina: What were your greatest concerns at the time about the developing situation and now five months later which of them came to be realized? Did significant issues or problems come up that you hadn't anticipated?

David: As with any new virus there was a lot of uncertainty in the initial times and especially this virus since as a respiratory virus it took on a couple different concerns. Number one we needed to make sure that we had the correct number of ventilators and since the modeling was quite variable initially, we didn't know how many staff and physicians we may need if a surge did happen. Luckily we worked with this county and with our Stanford system to try to really figure out what different models could look like. We are very fortunate that our ventilator use has not been as much as previously anticipated.

We have been working on our PPE supplies and that has been the area of most concern. So specifically we've been looking at N-95 masks because those are providing the best protection for health care workers. We've been very lucky that Stanford has a very robust supply chain in order to make sure that all of our staff and physicians are protected.

Gina: Great! Thank you. Now that California has begun to open up and the number of new cases is growing significantly and we are experiencing that particularly here in Alameda County. What can you tell us about the situation in the Tri-Valley at this point in the demographics associated with positive tests.

David: We've been very fortunate that Stanford has been publishing their statistics online. If you go on the Stanford Health Care website for the lab you can see the total number of tests that have been performed, the number of positive tests and the positive rate over time. Specifically for the Tri-Valley we've tested thousands of individuals and are now testing hundreds per day. We can see that our demographic data is actually mirroring some of the national trends. We see that for the overall number of positive cases the trend is going towards a younger age group of nineteen to forty four.

Gina: We're all anxiously following the progress on development of a vaccine or a cure. In advance of that one of the important global strategies in combating the virus is the development of therapeutics to treat what can be the very devastating symptoms of the disease. Stanford health care recently played an important role in national clinical trials with the drug remdesivir. Tell us about how the drug works, how Stanford got involved and what role Stanford played.

David: Stanford was one of the key sites that participated in the drug remdesivir. Remdesivir is a broad spectrum antiviral medication typically given intravenously. We participated in the trials on both our Pleasanton campus and in Palo Alto as part of the N.I.H's adaptive Covid Treatment Trial which is called ACT. This was actually a trial that was set up across sixty sites over the whole world and Stanford Health Care Valley Care was one of those sites.

Gina: Does broad spectrum mean that it can help with a number of different viruses?

David: It's been tested for several different viruses however specifically for COVID-19 it has been found to be useful in shortening the amount of recovery time for adult hospitalized patients with evidence of a lower respiratory tract infection.

Gina: Are there other promising therapeutics in the pipeline and might Stanford Health Care be involved in future trials?

David: We're looking at multiple different therapeutic options at Stanford Health Care. Not only are we considering antivirals but we're also considering medications that may affect your immune system such as steroids. Steroids have shown some promising results and we're looking into it further.

Gina: It's great to hear that there are a variety of options being pursued to treat the virus. We understand that you've been partnering with two of our national laboratories,

Sandia and Lawrence Livermore national laboratories on COVID-19 areas of research. Can you say a little bit more about that and what the results have been?

David: Yes, we've engaged with the national labs on several different occasions and one of the most successful engagements was the ability to work with the national labs on our single use ventilator components. We worked with Lawrence Livermore National Lab and Sandia National Labs to evaluate sterilization methods so that certain parts of the ventilator systems could potentially be reused. Sandia actually helped us with exposing parts of these critical pieces of the ventilator to supercritical CO₂ to test sterilization. They evaluated certain components to assess the integrity before and after sterilization. We've been very blessed to have them as partners.

Gina: Since the beginning of the pandemic some of us have experienced telemedicine for the first time for more routine doctor visits. I personally had several and I thought they were very effective. Is this something that's here to stay and how do you think we might change the way we educate and train doctors?

David: I think this is actually one of the most exciting changes that could come out of COVID-19. I think there are multiple different benefits that can be provided by telemedicine and as you said we will need to educate providers on how to appropriately use it. There's a big convenience factor. Patients being able to interact easily with their care team. Also it extends the reach of providers to more patients and patients in more remote locations can be monitored. Also it may increase the ability of patients to see their providers and decrease no show rates which will increase compliance.

I'm very excited about telemedicine. I think there's a lot of opportunity. At Stanford Health Care Valley Care we've actually been one of the leaders in the use of telemedicine. We've used it for treating our stroke patients using Telestroke and then we also have launched many different telemedicine machines inside the hospital for seeing patients with COVID-19.

There's some benefits to using telemedicine for patients with COVID-19 in that we can actually reduce the amount of PPE and reduce the amount of exposure to our staff and other patients by using telemedicine options. And not only are there in-patient uses but there's also additional out-patient uses that will probably occur over time. There's still some uncertainty though about the future state of telemedicine but I anticipate that a lot of components will actually stay.

Gina: What other changes might you anticipate that we would see in the near and long term care protocols?

David: We're looking at a couple of different major topics as the COVID-19 experience continues. Some of them are looking at our visitor access and visitor screening tools. We're also looking at PPE preparedness. Over the long run we'll definitely need to look at our telemedicine use and also look at our supply chains and really analyzing them well because there's a major international component to our supply chains. Additionally we'll need to think about some reusability and reprocessing of certain components such as our PPE and also, as we talked about, our ventilator pieces.

Gina: Have there been challenges in acquiring supplies you need for testing?

David: Yes, actually that is something that Stanford is really focused on and their supply chain team is working on it every day. There are a couple different components of testing that they're focused on. Number one, the swabs, and they've worked with many Bay Area companies in order to figure out how best to get a stable supply of the swabs. Additionally there is the media and the other parts of the test kit that Stanford is looking into.

Gina: We're all beginning to understand better how complex the supply chain issue has become. Does Stanford Health Care Valley Care have to engage with international suppliers for various components of the supply chain?

David: That's a great question. We're very fortunate at Stanford Health Care Valley Care to be part of a broader system of Stanford Health Care. Stanford Health Care overall does work with multiple different international suppliers. At Stanford Health Care Valley Care we actually report our use of all of our components to Stanford Health Care frequently. We have dashboards that track all of our PPE and other components necessary for appropriate care. Stanford Health Care sees those pieces of information and then negotiates in order to obtain a stable and robust source of supplies.

Gina: So do you think there's a better way than having each individual healthcare system out there negotiating for supplies on their own?

David: So this is a challenge. There are actually certain cases when hospitals and counties have worked together in order to make sure that we have the appropriate treatment and supplies needed. For example, for the important medication remdesivir the county has helped us appropriately allocate the drug to the needed patients. We work very closely with the county and our other hospitals in order to make sure that each individual patient does receive the medication that they actually need.

Gina: I'd like to spend a minute talking to you about Quest and how as an educator you see possibilities for partnering and working together in the future. But first if you could just comment on the value you see in a Science Center in the Tri valley.

David: I'm definitely excited about Quest. I think science centers overall can be places to explore, to interact and connect and most importantly can expose individuals to the scientific method.

Gina: As we've seen with COVID the importance of science and understanding health is in an area ripe for exploration. We think Quest has an opportunity to amplify on your work in health care delivery by helping to build healthy communities especially through engagement with a diverse cross section of our population. What do you think of the idea of partnering with Quest on summer workshops related to science and health care awareness? Do you have any thoughts on areas of interest?

David: Yes, we now have many Stanford medicine physicians in the Tri-valley and each one is very committed to Stanford's missions of excellence in clinical care, research and education. As I mentioned, we have started some summer programs for high school students to expose them to clinical medicine. I think there are significant opportunities in all types of programming with all the faculty we now have. I think there's collaboration potential and in certain areas of interest such as advances in clinical medicine, understanding new medical innovations and devices and certain research opportunities.

Gina: It's really great to see when the healthcare community is embedded in the greater community. It's really beneficial for everybody.

So as we finish up, on a personal note I believe your wife is also a physician and that you have a one year old and a three year old at home. That sounds like a full plate in ordinary times. How are you managing what I can only imagine is a very challenging work life balance?

David: Yes, it's been a very challenging time but we've been very fortunate to have a lot of support from Stanford and the whole Tri-valley community. We've also been navigating the significant amount of uncertainty that everyone has but it's been amazing to see how the whole community has come together and responded in the Bay Area.

Gina: David, we want to thank you so much for your time and for sharing your experience and insights into something that has affected all of our lives in such a dramatic way.

On a final note we're all keenly interested in progress on the development of the vaccine. We're hoping to connect with you and others at Stanford Health Care Valley Care here perhaps later this summer or early fall as we follow the evolving pandemic hear more about vaccine development from one of your colleagues.

David: Thank you for the opportunity to join you and your listeners today. We have many fantastic Stanford medicine infectious disease experts who would be very happy to discuss vaccine development and other COVID related treatments.

Gina: So in closing I'd like to thank our director today Rick Stulen for his help in developing the content of this interview. Rick is a quest board member and made the arrangements for us to talk to David today. I'd also like to thank Caleb Cheung who is Quest's Director of Learning and Innovation. Caleb was the engineer for today's program and did all the final editing. And last but not least, the Quest Science Center for sponsoring the reQuestEd series. To learn more, join us at quest-science.org.