

# Mayo Clinic Q & A “ Dr. Vijay Shah and Natalie Caine “ Depar...

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## SUMMARY KEYWORDS

patients, mayo clinic, vijay, opportunities, partners, department, medicine, support, digital, colleagues, people, projects, natalie, pillar, clinic, ability, cures, technologies, important, care

## SPEAKERS

Dr. Halena Gazelka, Dr. Vijay Shah, Narrator, Natalie Caine

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- N** Narrator 00:01  
Coming up on Mayo Clinic Q&A, the Department of Medicine is the largest department at Mayo Clinic and is leading the way on innovation in patient care.
- D** Dr. Vijay Shah 00:10  
And we're really starting to think now, not about a traditional clinic template of eight to five with morning and afternoon clinic, but just a continuous plan. And we call that the digital plan, and how do we continuously take care of patients when they're at home. And that's relevant from patients leaving the hospital earlier. It's relevant for patients avoiding visits to Mayo Clinic where we can provide the care to them. And it's just relevant for our ability to triage and help patients know when they really need to come.
- N** Narrator 00:41  
The Department of Medicine is using several strategies to transform the medical practice by providing more access to Mayo Clinic.
- N** Natalie Caine 00:49  
And they're really expanding our reach to meet patients across both our nation and nationally, in particular in some of our underserved areas or rural communities where we have great opportunities now with digital and new technologies to meet them.
- D** Dr. Halena Gazelka 01:03

Welcome, everyone to Mayo Clinic Q&A. I'm your host Dr. Halena Gazelka. The Department of Medicine is the largest department at Mayo Clinic and is helping lead the transformation of healthcare. Important innovations include moving to digital and virtual care to meet patients where they are and addressing health equity. Joining us to discuss this important topic today, our Department of Medicine Chair, Dr. Vijay Shah, and Associate Administrator, Natalie Caine. Welcome both of you to the program.

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Dr. Vijay Shah 01:33

Thank you, Halena.

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Dr. Halena Gazelka 01:34

Well, it's fun to have you on to talk about this today. And I learned something already that the Department of Medicine is the largest department. Okay, my first question is for both of you. Obviously, caring for patients is the core of what the Department of Medicine does. When I think of medicine, I think of you taking care of patients, it's the core of your mission and work. How do you keep patients when you have so many things going on at the center of your research, practice, and educational goals while you're continuing to lead the largest department at Mayo Clinic and see a lot of patients?

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Dr. Vijay Shah 02:08

Well, Halena, actually it's easy because patients are our North star. We're all about patients all day, every day. And so, all of our strategies cascade out of that where we know we want to go. And so, I'll talk a little bit about what we're doing, broadly that cascades out from patients. We have a few different pillars that we're focused on as part of our strategy in terms of our vision to prevent and cure medical disease worldwide. One of those pillars is purely about practice innovation. That has a lot of what is referred to as digital transformation in it, how do we work smarter, more efficiently, and use technologies to help us provide better value for our patients. And in addition to practice innovations there is a major focus on partnering externally, and Natalie's gonna talk more about that later. That falls under a pillar we call business development and platform. Additionally, there's amazing cures going on these days, you know, molecular biology is transforming. And that pillar we call cures, and we'll talk more about that as well. And then the most important pillar is our people in our culture, because our people are our greatest asset, and we are nowhere without our people. And so, those are the four pillars that we build our strategy around. And this year we actually completed a retreat that focused on new care models. And maybe Natalie wants to talk a little bit about the themes that came out of the retreat.

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Natalie Caine 03:42

Thanks Vijay. I'm really excited about the themes that emerged in 2022. We have great opportunities to continue to accelerate our patient experience, really thinking about immersive opportunities for both when patients are here on campus, but also reaching them where they are. Other opportunities we have is to continue to evolve our teams to meet the needs of our

patients, make sure that as we're bringing in new cures and technologies, we have the right structure and support. We're investing in our talent and supporting them as they grow in their careers and have a great opportunity to really accelerate that work as we move very rapidly post COVID with digital opportunities. A few other things we're focused on is really the transition of care. So, rather than thinking purely about the outpatient or the hospital practice, how we're supporting patients as they transcend across you know, their home, through the care journey and then back to their home, which really is our goal to get them back in their home environment as healthy as possible and do that in a seamless way that meets their needs. And then really expanding our reach to meet patients across both our nation and nationally, in particular in some of our underserved areas or rural communities where we have great opportunities now with digital and new technologies to meet them.

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Dr. Halena Gazelka 05:06

Wow, that's exciting. That's a lot going on in the Department of Medicine. And I know that transformation, it doesn't just happen with your department, you're working with many other internal partners here at Mayo Clinic, including the Cancer Center, the Center for Digital Health and Platform, how do you work with them Vijay, to transform care?

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Dr. Vijay Shah 05:25

Well, we can do a lot more together than we can do alone. And so, we have lots of friends. And you mentioned some of them, Halena. And so, I'll give you some examples. John Halamka is one of our partners in the Mayo Clinic Platform. And we have a number of projects ongoing, and those are external facing. So, you can think about digital transformation as an external face at Mayo Clinic. And that's the Mayo Clinic Platform. How do we touch more lives globally, and that's what that's all about. And we partner with John on some projects that relate to a GI endoscopy database. We also partner around radiomics for pulmonary nodules, and a number of other projects as well. So, the portfolio is quite large, and the focus there is really about how do we use Mayo Clinic data and Mayo Clinic knowledge to connect individuals outside of Mayo Clinic who may value from our data and our knowledge. And that's simply what our Platform is doing. And then on the other hand, internally, our digital transformation partners with the Center for Digital Health, and we have lots of projects with them. And it's great fun. One of the examples I will give you is Remedy. And Remedy is a project that really focuses around how do we meet patients where they are, instead of making patients meet us where we are. And you can imagine that if you can monitor a patient and not just do a televisit but do telemonitoring and you can collect their information and compile it and make your actions to help them based on the information that's coming in continuously, then wow you can really reimagine what a patient visit is going to look like. And it's going to be much more value for the patient and much more value for us so that we can make sure that people coming in are really those that are sickest and really need our help, like through a surgery or a procedure. So, those are a couple of examples, and many other partners as well.

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Dr. Halena Gazelka 07:23

I just love having the opportunity to visit with people like you, Vijay and Natalie today, because I learned so much myself about what's going on at Mayo Clinic. It's a big place, and we don't always know what others are working on. So, I love this. Natalie, I know that you have

partnerships that extend outside of Mayo Clinic, and I'm wondering how do you use external connections to transform healthcare?

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Natalie Caine 07:49

Yeah, thanks for that question. I think, you know, we're really fortunate to have such amazing colleagues with phenomenal expertise in what they do in the Department of Medicine and serve as a connector. So, I think we really feel obligated to help take that in partnership with our colleagues in platform and others that Vijay has mentioned, and really find the right strategic fit that is also aligned with our values to really help us meet what we feel is an obligation to expand our reach. You know, many patients are able to come to Mayo Clinic, not all of them are, and so we feel there's a great opportunity to maintain connections with patients, some of which won't have the opportunity or will come to Mayo periodically. But this gives us great opportunities to expand that knowledge, technology, and Mayo Clinic care to them in a variety of ways with partners that we are strategically aligned with from a value standpoint. And it's really been exciting to see a number of those opportunities take off. One partnership, for example, is with R-Zero. That is a company that focuses on making safe spaces. And so, with our colleagues and expertise and ID partnering with them, we can really reimagine what safe spaces in the future we're going to be in places like schools, gymnasiums, healthcare facilities, as we're all working to move forward together and safe spaces, it's really exciting to see what this team is able to accomplish.

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Dr. Halena Gazelka 09:14

That's really interesting. Vijay, you mentioned something earlier that I have thought is one of the most amazing silver linings of the COVID pandemic, and that is this use of digital and virtual care. And it's really accelerated during the pandemic. We almost did no virtual visits before the pandemic and then have done many, and I've enjoyed meeting people virtually, patients virtually who would not have been able to travel to the clinic to see me in person. So, how do you anticipate implementing digital and virtual care solutions to reach patients where they are? What does it look like now today, what I think is pretty amazing, versus what we'll see in 2030?

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Dr. Vijay Shah 09:58

So, Halena I think we've heard reached a tipping point. But what I mean by that is that we're not going to go backwards now. There are some things pre COVID that were good, and we are bringing some of those things back, our ability to interact with colleagues, we all love that, our ability to go out together and celebrate. We will bring those things back. But there's other things in healthcare that we're not going to go backwards. Patients now understand the value of remote care. And I gave you a vignette of that in terms of moving from a telehealth visit to continuous 24/7 telemonitoring. But I think that just when I trained, some of the emerging technologies that really transformed healthcare, were around cell biology, molecular biology, some around imaging. Now, there's new opportunities. And those opportunities are really uncovered by our ability to do rapid and high throughput sequencing, okay, of DNA, RNA, protein, all the omics, and also our ability to have a level of computational firepower that we never imagined. You may remember, my parents used to work for IBM, and they used to have

like a mainframe that took up like a whole building, and now the transistors of all the all of the hardware that used to go in that, I mean, you could just basically, your laptop would have the power that would be running those mainframes. So, really we're at a transition now of how we can take those emerging technologies in sequencing and computation, and then accelerate them even further. And I'll give you an example of what the future might look like. Right now, we can take single cells from people and sequence them and uncover all kinds of individualized care pathways. And that's really the focus of our Center for Individualized Medicine. Can you imagine a future where we might be able to put the monitor into the person, and it's just a sentinel that's floating around, it's able to monitor every single cell in your body and tell you each day which of those cells might be likely to develop a cancer, which of those cells might be likely to become injured. So, even though we're not there yet, you can see that we're really at a point where the technologies with gene editing, gene therapies is really paving the way for us to do much bigger things much faster.

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Dr. Halena Gazelka 12:28

That is just amazing. What do you see Vijay, as the biggest areas of growth and development for the Department of Medicine, say over the next three to five years or so?

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Dr. Vijay Shah 12:38

Well, there's lots of things. I think I've given you a couple of vignettes about how I imagined the patient encounter. And we're really starting to think now, not about a traditional clinic template of eight to five with a morning and an afternoon clinic, but just a continuous clinic. And we call that the digital clinic. And how do we continuously take care of patients when they're at home. And that's relevant from patients leaving the hospital earlier, it's relevant for patients avoiding visits to Mayo Clinic where we can provide the care to them. And it's just relevant for our ability to triage and help patients know when they really need to come. So, one of the projects now that we're launching is with our colleagues in Pathology, and it's called Diagnosis at Home. How can people get the testing they need right in their house, and maybe they don't have to come to Mayo Clinic just to get their blood drawn. And probably right now, if they need an endoscopy we still need them to come. But you can imagine that we're moving towards a future where we can provide care for patients in the way that they want it.

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Dr. Halena Gazelka 13:50

Well, that would just be amazing. I love learning about this. Natalie a little bit different topic, diversity, equity, and inclusion efforts are really important to across the institution at this time and going forward. Can you share more about how the Department of Medicine is addressing health equity issues and facilitating community engagement?

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Natalie Caine 14:14

Thanks, and I appreciate the opportunity to talk about such an important and timely topic. I would say we're really fortunate in the Department of Medicine to have such amazing leaders that are really committed and passionate to this topic. And so, we have those leaders in every

division that makes up the department and really are committed to this as a leadership position. We also have worked a part of our consultants travel opportunity is to reinvest some of those days here to do community service within the Rochester community, and I think that's been well received.

**D** Dr. Halena Gazelka 14:49  
That's a great idea.

**N** Natalie Caine 14:50  
Yeah, as you might imagine, we have very committed and talented colleagues that do a lot to support our community and so, we want to make that an easier process for them, and support them in their abilities to do that, I would say we also have partnerships with a group that focuses on the homelessness in Rochester. We also partner with our colleagues in Community Internal Medicine to support a variety of activities around things with our learners, as well as the Good Samaritan Clinic in town. And then really across all the departments working to make sure that we have an inclusive environment and are supporting all our patients who bring a variety of needs and recognizing those and supporting them through our journey. So, it's really been quite inspiring to be a part of that, and really honored to help support the commitment both to our community, and our patients, and creating an inclusive environment.

**D** Dr. Halena Gazelka 15:44  
That's wonderful. It's been gratifying to see this become a real focus for all of us who work at Mayo Clinic. So important. Thank you. Any last words that you'd like to share? Vijay or Natalie?

**D** Dr. Vijay Shah 15:57  
Natalie, you go ahead.

**N** Natalie Caine 15:59  
Well, I just like to, you know, thank you for the opportunity to share a little bit about what the Department of Medicine is up to. I think it's really been an honor to support the team. And you know, we're really committed to being there for our staff and helping make sure that patients overall get the best integrated care. And so, it's been great to partner with Vijay on this journey and appreciate your time today.

**D** Dr. Vijay Shah 16:20  
I will just add, it's all about our people. It's all about our Mayo Clinic people. And that's how we're going to help our patients. And that's how we're going to make Mayo Clinic move forward.

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Dr. Halena Gazelka 16:31

I love that. You said a little bit earlier Vijay, about the people and how important of an asset they are to us. And I have to agree that when people ask me, what's that special sauce at Mayo Clinic, I say it's the people who work here that just make this an amazing place to be not only a colleague, but also to be a patient. So, thank you both for being here today.

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Dr. Vijay Shah 16:53

Thank you so much.

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Dr. Halena Gazelka 16:55

Our thanks to Dr. Vijay Shah and Natalie Caine for being here today to talk about the transformation that's occurring in the Department of Medicine here at Mayo Clinic. I hope that you learned something. I know that I did. And we wish each of you a wonderful day.

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Narrator 17:11

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