
# A QUICK DOSE OF CE

MLI's Podcast for Healthcare Professionals

## *EPISODE #2 – Diabetes Management Through Telehealth: Helping Clinicians Feel Confident Managing Their Patients via Tele-Health – Interview With Dr. Rayhan Lal*

## Transcript

***Kristin*:** Hi, and welcome to "*A Quick Dose of CE*," MLI's podcast for *healthcare* professionals. I'm Kristin Gusack and on today's episode I will interview Dr. Rayhan Lal, an Instructor of pediatrics in endocrinology and diabetes and an Instructor of medicine in endocrinology, gerontology, and metabolism at Stanford Hospital and Clinics and Lucile Packard Children's Hospital in Stanford, California, ….explores best practices for using telemedicine to provide optimal type 2 diabetes management, including addressing glycemic control, blood pressure control, weight gain, and behavioral challenges.

Thanks for joining us, Dr. Lal, on this podcast episode today. We are so excited to talk with you.

***Dr. Lal*:** Thank you so much, Kristin. Sure do appreciate you guys having me on. And a pleasure to answer any questions you have.

***Kristin*:** Thank you, thank you. COVID has really been challenging in so many ways, and I think so many healthcare providers have had to adapt. I think that in some disease states this has been really difficult, but I kind of feel like in diabetes you've been doing this for a while. Maybe not the telehealth portion but certainly sharing data, CGM—these things have been used in diabetes for a while. Do you think diabetes management via telehealth is better prepared than other therapeutic areas because of this?

***Dr. Lal*:** Well, that's a great question. And certainly, diabetes has been a model for many chronic diseases and chronic disease management over the years. You know, when I talk

about diabetes telehealth, this is something that we really have, hopefully, been doing a little bit of even prior to COVID. But I think the introduction of this global pandemic has really been important for getting these technologies and using some of this architecture that we already had before in a real-life situation.

So, for example, we have done remote uploads of data for a long time preceding the pandemic, but now we actually are using that via telehealth and using these other modalities like CGM to get data from the cloud and access it wherever we need to be.

***Kristin*:** You are definitely an expert in this area. Did you want to give our listeners a little background on how you found your way to diabetes?

***Dr. Lal*:** Sure thing, sure thing. So, I've had Type 1 diabetes for about 30 years. I really never wanted to do anything diabetes related. I took my injections. I occasionally checked a blood sugar or two, but I really wanted to be an electrical engineer and computer scientist. So, I worked my way towards that. I went to Cal, got my Bachelors in that, and was actually working in the field when my two younger sisters also got Type 1 diabetes.

So, it was at that time that I decided that I wanted to sort of shift gears and help out all my brothers and sisters out there with diabetes. So, I made my way to medical school. I couldn't decide whether I wanted to see kids or adults with diabetes, so I went to LA County Hospital, did a combined residency in internal medicine and pediatrics. And then wanting to bridge that knowledge gap between diabetes technology, my engineering, and my medical experience, I went to Stanford to pursue a fellowship in adult and pediatric endocrinology. And I've been working with Dr. Bruce Buckingham for the last several years in the diabetes technology space and really have enjoyed getting to work with the industries, the open-source community, and various other players in this field to reduce the burden of diabetes.

***Kristin*:** That's amazing. That's a really amazing story. So, positioning now diabetes in telehealth, are there any kind of special challenges that you see and additional questions,

maybe, that you find yourself asking your patients via telehealth that you might not have done seeing them in the clinic?

***Dr. Lal*:** It's a great question and let me speak in generalizations here. There are many times where diabetes visits get very focused on the data and the numbers, and I've never run my diabetes clinic like that, in person or via telehealth. I always prefer to look at what are the human factors going on for this individual.

Diabetes oftentimes just becomes a reflection of what else is going on in a person's life. And as a result, I really want to be mindful of what are the struggles that an individual is going through? You know, there are certain struggles which are very important to consider with the pandemic—depression, anxiety—are all increased. We're seeing this in the general population. And with all this popular media coverage about the concerns with diabetes and COVID, we are seeing it, certainly, as much in the diabetes community.

And so, you know, those sorts of things weigh heavy on an individual. They take up part of your day, part of the plate you have; there's only so much room on your plate. And when things get overwhelming, diabetes tends to be the first thing that falls off that plate.

So, what I like to do, be it in telehealth or in person, is to first explore what is going on in a person's life. You know, how, how is the pandemic affecting them? What does a day in the life look like? And understanding that really helps me understand then where diabetes falls in all that and, you know, that helps me address it more than asking, you know, "Well, what was your blood sugar 2 weeks ago on a Tuesday?" Or something like that.

***Kristin*:** Yeah, that's what I was thinking too, maybe how their routine has changed. I mean everybody's routine has kind of changed. I think that, you know, especially with diabetes, are they exercising less? Are they eating more pasta? Less fresh vegetables because they're harder to come by? What about the dreaded COVID-19? Are these sort of things that you're seeing with your patients?

***Dr. Lal*:** Yeah. So, lots of lifestyle changes. I've had many people who were very fervent gym attendees, and suddenly that's not been as much of an option for them. So, finding alternative ways to stay physically active, still finding some time to go outdoors even if, you know, you're donning protective gear, is very important.

So, weight gain, weight loss during this whole pandemic has been all over the places. But certainly among some of our patients we are seeing a weight gain from the increase in sedentary behavior and the access to the food more easily at home. And you know, various factors influence what calories we do or do not have access to.

So, it is important to be mindful of these changes and, you know, if you come into see us in the clinic, we do have a weight scale. So, even if you don't want to look at your weight, you sort of get an impression of it every time you come into clinic. Whereas if we are having a telehealth meeting, we may need you to use your scale at home if you have one. And sometimes that's not readily available either.

***Kristin*:** Yeah. I would think, too, things like stress or social isolation, you know, which just really wreak havoc, and blood pressure. A lot of those impacting your patients as well.

***Dr. Lal*:** Absolutely. And certainly, responses to stress hormones are certainly there. Those who actually do get COVID have a heck of a time with blood sugar management. In the hospital we've seen people on insulin drips going upwards of 50 units an hour, which is just incredibly high rates. So, you know, I think all of this comes up with this increased challenge in managing blood sugars.

And I can at least say in the Typetype 1 community what's been interesting is that we have actually seen some improvement in blood sugar control while people have been home, which has been interesting.

***Kristin*:** Hmm, that is. That was going to be kind of my next question was how does those affect medication management in this population, especially now with so many factors changing?

***Dr. Lal*:** Yeah, you know, one of the things that's really been heartening to me is that we have people who are now sort of in their homes, you know, if not directly having some shelter in place going on. And in these situations, this is sort of an ideal time to try new therapies. So, if you've been too busy or, you know, if you feel like work has gotten in the way of starting a new therapy or you just didn't have time. Now is as good a time as any to sort of try new therapies and see how things go.

So, I think that ability to experiment—to try a few new things–has been helpful. I also think, you know, for those who are able to maintain a more or less constant schedule, that can be very helpful as well. And basically, any time that one can additionally use for their diabetes will oftentimes result in better management.

***Kristin*:** Are you finding that with maybe some of the newer devices as well that they're kind of having more time to figure things out?

***Dr. Lal*:** Yeah. And again, bringing us back to sort of the Typetype 1 world a little bit more, we definitely have far more people getting on continuous glucose monitors, which then make it so easy for us to access the data and use the data. And then, also, insulin pumps and automated insulin dosing systems—all of these are coming out now in rapid succession and improving the way we manage diabetes.

***Kristin*:** Let's dig a little deeper into the science as far as how you're managing some of the medicines or deciding between some of the medicines and managing somebody's environment and what's going on—you know, the DPP4s, the SGLT2 inhibitors, maybe GLP-1s. What's going through your mind when you're looking at a patient and deciding what to do when they're not sitting right in front of you?

***Dr. Lal*:** Yeah, this is a great question, and we are so lucky that we now have all these agents that we can use for Type 2. When I was in training, metformin—obviously, still a very effective agent—was the rule of the day. But then, you know, we were going down to sulfonylureas back in the day as a second-line agent, and things have certainly changed since then.

The issue with treating Type 2 diabetes with insulin is sometimes, yes, you need it to reduce the blood sugars. But it comes with the risks of hypoglycemia and weight gain. And effectively, if you take somebody who just doesn't quite make enough and you're just giving them more insulin, you can even compound the problem depending upon the situation. But we need to get the blood sugars down sometimes. So, that's why we do it. And it can be very effective for preventing microvascular complications.

But we now have agents that are either weight neutral, such as metformin or the DPP4s, or can actually result in some weight gain, like the GLP-1s or the SGLT2s.

So, in my mind I usually will start out with metformin in most people just because we have a good, long history and know that it's an effective medicine. And then I'll consider, you know, either DPP4s or SGLT2s or GLP-1 antagonists. I usually try to separate out the GLP-1 initiation from the metformin initiation because they both carry risks of nausea and GI side effects, so I don't like to hit somebody twice with those same events. So, I'll oftentimes start with metformin, consider maybe an SGLT2 if they're still making insulin. And then move on to either DPP4 or GLP-1.

And, you know, the preference for an oral agent versus an injectable agent is another consideration. Some people who are used to injections it's no problem. And with these autoinjectors it's been really easy and convenient to dose these medicines. And the needles have gotten so small that if they made them any thinner they would literally bend as you tried to put them through the skin.

So, it's really become much easier to take these injectables, and for the GLP-1s we have a choice between oral and weekly injectables. Some people prefer the weekly injectable because they just think that they can remember that a little bit easier than taking a once-daily.

So, all of these are important considerations. And you have to sort of talk to somebody about what their preference is. And then, also, the relative efficacy because you will get a little bit more weight loss with the injectable GLP-1s than the oral version.

***Kristin*:** What about any kind of cardiovascular issues? Does that come into play? Are you thinking that as you're deciding what therapy?

***Dr. Lal*:** Certainly. Both the cardiovascular and the renal sides of the equations are super important in these decisions. So, up until a few years ago, really if you had diabetes our only treatment to slow the progression was an ACE inhibitor or an angiotensin receptor blocker. But now the SGLT2s are showing more and more evidence that they actually can delay the development of severe kidney disease for individuals with diabetes. And similarly, on the heart disease major adverse cardiovascular events, both the GLP-1s and SGLT2s have shown good evidence for cardioprotection. And the SGLT2s also decrease blood pressure a little bit.

***Kristin*:** Yeah, yeah. I'm going to kind of switch gears on you now and talk about some of the issues—some of the papers that we're seeing come out in telehealth is that there's really a fragmentation of care. Diabetes seems to be such a team approach and I'm wondering, are you seeing that? Are you seeing that it's more difficult? Are you seeing a fragmentation of care or is it going the opposite direction? The world's opening now because it's via telephone or computer versus driving?

***Dr. Lal*:** Well, I'll tell you in our pediatric practice I have such a great multidisciplinary team that I get to work with. So, in addition to myself, our visits can include an educator, a dietitian, a social worker, a trained diabetes psychologist, and all of these resources are tremendous.

It's so much easier when that resource is there at the same time that you are because it's oftentimes easy to say, "Miss a follow-up appointment with somebody else," or to say, "Well, you know what, if I have to go to four different providers to deal with this problem, then I'm just going to miss, you know, a couple of them."

So, I think the reality is that when you have those resources at your beck and call during a visit, it makes it a lot easier for the patient to take advantage of those. And oftentimes it's easier to tell someone, "Well, you're here. Let's have you talk to the psychologist while you're here since we have that available." Sometimes it's easier in that situation than to try to get somebody to ask for the help so that you put in the referral to get them there.

So, I think we have been doing a tremendous job of this on the pediatric endocrinology and diabetes side. I think it's been a little bit of a tougher sell to do those sort of multidisciplinary clinics on the adult side. We still have all those resources, but they're not necessarily available at that given visit. But I will say that we can refer, and then those visits can also be done as telehealth. So, that is a big advantage.

If you have somebody coming from 100 miles away to see you and now you've suddenly said, "Okay, well you can do this from your house instead of coming to visit us four times for these four different resources." That's a huge savings for that person, and they may be more likely to engage because they are able to do it without this long travel time.

***Kristin*:** Yeah, I can see that absolutely. So, what are some of the clinical limitations of telemedicine with diabetes? When might a patient have to come in?

***Dr. Lal*:** This is a great question. So, I think at all times we're sort of expanding the bounds of what we once were comfortable with. What I will say just to start us off is, you know, at the beginning of the pandemic it was easy enough to say, "Well, you know, it's only been 3 months since I last saw the patient in person. It's only been 4 months since I last saw the patient." But now we're about a year out from that. So, it has been quite some time since

folks have laid hands on a patient. And it's important to realize that things do change over that period of time. So, it is important that we start exercising the resources of telehealth in order to sort of get the exams we need to get done and to keep track of the things that we are needing to do as part of routine health maintenance.

So, for example, you know, we like to get yearly labs on our patients to check for microalbumin in the urine. We like to get screening tests. So, if, and now it's been a year since you last did those things, it may be a good opportunity to get people back into the labs. For, you know, foot exams and looking for ulcers and things like this, it is very important that one does do sort of a thorough exam. And a lot of that can be done visually. However, if somebody does start to present with any of those findings, then it might be important that they actually do come in to see a provider.

Now that may not be the endocrinologist but certainly somebody to examine any wounds or ulcerations on the foot. Super important.

Also, we have the retinal exams. Now one of the beautiful things about retinal exams is we've been doing retinal photos for years. You know, people get pictures taken, those get uploaded, and then somebody else takes a look. It can even be in a different jurisdiction completely. But it's reviewed by an ophthalmologist. So, those sorts of things can be done.

There's other factors, like things like weight, which we were talking about. Well, if somebody does have a scale in their home, then that can provide us a little bit of what that information that we need. But it's also possible for people to go to their routine clinic visits or see a satellite clinic and maybe get some vitals taken there. And that can all be very helpful as well.

And as it comes down to it, you know, endocrinology is not sort of taken in isolation in this whole scheme of things, right? It's not just us who have had to make this shift into telehealth. It's all the different providers, all the different specialties. So, in other words, your colleague who's a psychologist or a psychiatrist? They've had to make a move to telehealth. And now

isn't it great that I can send a person to another provider who has all of this experience, all of this know-how, and you don't have to go 50 miles to go and see them?

And the same thing holds true of our ophthalmologists. The same thing holds true for our surgeons. They can at least start some of these visits with telehealth and then, depending upon the situation, decide does this person need to come in or not.

And so, I think part of all of this is the whole health system making this shift and, basically, trying to get everybody onboard to make care delivery really optimal for all of our patients.

***Kristin*:** You bring up an excellent point and we have seen this. We've been doing this now for a year, and so some of these annual tests are important. Are you seeing that patients are starting to venture out and come in and have these? Is it a generational issue? Are some of the older patients or younger patients doing this more readily? What are you seeing in practice?

***Dr. Lal*:** Yeah. So, I think this is an excellent question. So, I will say in some of our clinical studies, for example, if the study was dependent on an outcome, such as A1C, they would even pay to have lab vans come out to people's houses and do these blood draws because they needed them for the study, and that was economical enough for them to get done.

I haven't seen as much of that in clinical practice, but I do think people through different periods in all of this have been more or less comfortable coming to the lab, you know. Initially, we had these strong shelter-in-place orders here in California. People were a little bit worried even when our case rates were on the lower side. Then things started to pick up as we opened back up. So, then people got a little more worried again and we're more worried about coming to the labs.

The one nice thing is that now with working within healthcare systems where people have been vaccinated, while we can't say 100%, you know, this is preventative, certainly, I would

feel more comfortable with going to the lab myself or sending someone else there now that more of us are vaccinated, particularly in the healthcare field.

And so, I think especially amongst elderly folks who are getting the vaccines and for younger people who would at least be in the vicinity of people who have gotten the vaccines, this may be making people a little bit more comfortable with coming back to the lab.

***Kristin*:** What do you see in the future? Okay, so post-COVID, people are vaccinated, everybody's feeling more comfortable venturing out. Is telehealth here to stay? What are you seeing? What do you think?

***Dr. Lal*:** You know, I think it's one of those really important questions, right? Because telehealth existed before the pandemic and it will exist after the pandemic. And I think part of that depends upon the individual. There are going to be some people who, like I said, are coming from 100 miles away and they're going to say, "I'm happy never doing another in-person encounter if I can help it."

And then there's going to be other people who maybe they like to see the physician in person. Maybe they like the in-person interaction and it's not too far away from them, so this becomes an easier modality.

I have many underserved patients who have no form of transport to get here but they do have a cell phone and they can connect to video chat on that. So, wouldn't it be great if we could offer care through those services? So, I think for those who have enjoyed it, and I know there are a lot of them in the endocrine world, there will be a continuation of telehealth. And for those who feel like they want to be seen in person, well we'll be there to serve them as well.

***Kristin*:** I think you've made so many nice points. And to kind of tie it up in a nice bow, I think that, certainly, COVID has changed our lives a lot, and in negative ways in a lot of cases. But I think that some of the advantages—the silver lining that has come out of this—has just been

incredible. You had mentioned about more time for patients to figure out medical devices and that everybody is doing telehealth, and there's kind of power in those providers needing to move along their telehealth continuum all at the same time. I think that's an excellent observation. Lack of transportation, you just said, and being able to maybe more readily serve the underprivileged population. These are all kind of silver linings. Are there any others that you're thinking of?

***Dr. Lal*:** I was just going to say that it is one of those situations which you never wish to happen, but it has progressed the field of telemedicine quite a bit. And, you know, it's under bad circumstances I think this has increased the amount and the quality of care we can deliver, especially to folks who couldn't otherwise get into the office.

And, you know, I think the other big, big picture item here is there are not enough endocrinologists in this country to take care of all the endocrine needs of the people. And it is one of those situations where, you know, there are some states that don't have a single pediatric endocrinologist. So, what a great situation where we can actually offer care without making people cross state lines. And I think that has been an important contributor and, hopefully, continues so that we can serve all the people.

***Kristin*:** Thank you, Dr. Lal. Isee it the same way that you do. I think there's just been a tremendous amount of advantages, and I hope that as we adopt a hybrid model in the future that we really play on the strengths that this situation has brought out. Thank you.

***Dr. Lal*:** Totally agree. Totally agree. And thank you so much, Kristin, for having me and really wish everybody health and safety and wellness while we emerge from this pandemic.

***Kristin*:** It was truly a pleasure. Thanks so much. And thank you all for listening in. This episode has been a collaboration between Medical Learning Institute, Inc., and The Endocrine Society.


# A QUICK DOSE OF CE

MLI's Podcast for Healthcare Professionals

To complete CE requirements, go to www.aquickdose.org or click the link in the show notes to complete the posttest and evaluation. And don't forget to subscribe to A Quick Dose of CE. Until next time, please take care of yourselves. We look forward to you joining us on the next episode.