Speaker 1:	00:01	Quality Improvement In the Time of COVID-19 is brought to you by the American Heart Association with support from Novartis Pharmaceuticals. As physicians, scientists, and researchers worldwide struggle to understand the COVID-19 pandemic, the American Heart Association has developed its COVID-19 CVD registry, powered by Get With the Guidelines, to activate data and aid research on the disease, treatment protocols, and risk factors tied to adverse cardiovascular outcomes. For more information, visit us at heart.org/covidregistry.
Dr. Sandeep Das:	00:32	Hello and welcome to our podcast on Quality Improvement In the Time of COVID-19. My name is Sandeep Das, I'm general cardiologist at UT Southwestern in Dallas. And I spend a lot of time doing quality of care and implementation science. Today I want to talk to you about Quality Improvement In the Time of COVID-19. The American Heart Association has built its extensive quality improvement program portfolio on the premise that patient outcomes improve when medical professionals follow the most up-to-date evidence-based treatment guidelines. One challenge of the COVID era, has been maintaining consistency and treating to existing standards of care for known conditions and diseases. As well as understanding of the novel impact of this virus. Together, we're going to examine these challenges more closely, and hear from experts across the country on how QI plays a role in the current situation. Today, we're speaking with Dr. Kannan Mutharasan to discuss establishing processes to maintain quality of care through telehealth. Kannan?
Dr. Kannan Muth...:	01:27	Hi. Thank you very much, Sandeep. I really appreciate the warm welcome and introduction. I'm a cardiologist here at Northwestern University Feinberg School of Medicine. And with me is one of the heart failure nurse practitioners on the team, Ms. Robin Fortman.
Dr. Sandeep Das:	01:41	So Kannan, can you tell us a little bit about the heart failure program at your hospital before the COVID era?
Dr. Kannan Muth...:	01:47	Certainly Sandeep. We have a strong interest in understanding the continuum of heart failure therapy. And I think one of the things that we worked very closely on is transitional care for heart failure patients. So we have a special program called the Heart Failure Bridge and Transition Team, that's really designed to help ensure close follow-up after the hospitalization for patients who are hospitalized with heart failure.

Dr. Sandeep Das: 02:09 And Robin, what are the things that we are now doing virtually that we used to do face-to-face?

Robin Fortman, ...: 02:16 Well, since COVID, we really are doing many of our visits over telemedicine, instead of bringing people into the clinic for in-person visits. A lot of our education for heart failure is actually done over the phone with the patient. Even with the inpatients at their bedside, we're doing a lot of over-the-phone teaching, including dietary teaching. We are doing medication reconciliation over the phone instead of in-person at the bedside.

Dr. Sandeep Das: 02:55 We're doing something pretty similar at UT Southwestern as well. I wonder what your thoughts on things that we can't do virtually. Like there's tangible, but there's also intangible things about your face-to-face encounter with the patient that you just may not pick up as well over the video.

Robin Fortman, ...: 03:10 Yeah. We've actually talked a lot about this lack of physical exam, and some of the telemedicine visits we are using video. And so we are trying to have the patients, "Can you show me your legs and feet? And can you show me your neck?" And so, physical exam is tough. There's no way to get a sense of how someone's lungs sound over telemedicine. So I would say it's that physical exam that we're really missing by doing a lot of our visits over the phone.

Dr. Sandeep Das: 03:51 Thanks Robin. And Kannan, I'm really been struck at how much of our traditional practice can fairly readily be replaced by virtual care. Does that mean that pre-COVID we were providing a lot of low-value services?

Dr. Kannan Muth...: 04:04 Yeah, it's a great question. I think that there is something about being there with a patient, in the same space, that is irreplaceable. I think a lot of what we feel is continuation of care is actually just based on the fact that we have a relationship with the patient preexisting, and now we can coast for the next several months. Sort of leveraging that relationship and continuing to provide care. I think there's just something about being in the same space with the patient that we can't fully replace. And I think time will tell how much of this trend towards telemedicine can continue.

Dr. Sandeep Das: 04:38 So one thing CMS did very well is, is rapidly adopting payment models for the new virtual environment. But, it's less clear to me how we transitioned some of our more typical quality

metrics. Do we need new metrics for the virtual environment? Do we need to adapt any of the existing metrics?

Dr. Kannan Muth...: 04:58 It's a great question. I think one of the things that's different about this environment is, we don't even necessarily have a full description of what we're doing. So even before I think we can get to process metrics that drive outcomes for telemedicine, I think we would really want to understand what is a description of how we're employing this? How are we using this within different cardiovascular conditions? I think there's a lot of heterogeneity. If you're an electrophysiologist, you may be more easily able to adapt to a telemedicine environment as compared to a heart failure specialist, because of the differential needs for physical examination in terms of providing the best value of care. So I think stepping back, the first thing we want to do is just understand what we're doing, and then start to build out appropriate metrics.

Dr. Sandeep Das: 05:44 Thank you. Now Robin, are you guys incorporating a lot of wearable technology or home technology that communicates remotely with your health system?

Robin Fortman, ...: 05:56 Yes, it's very patient-specific though. We did ship out telehealth kits that included a scale blood pressure cuff and thermometer. We don't have enough kits for every patient. And so some patients prior to telehealth and prior to the COVID pandemic, were very set up with wearable watches that would transmit EKG readings to us. It really is very patient-specific whether they have that capability in their home.

Dr. Sandeep Das: 06:38 So, it strikes me as you're saying that, how similar things are. Because we also put together a care package that we shipped off to patients with blood pressure cuffs and that kind of technology. So, I wonder how much of this is us duplicating effort and all doing the same thing in parallel here.

What about the impact of the virtualization of care on lower tech populations? I do a lot of my clinical work at Parkland Health and Hospital System, fantastic tertiary care hospital system, the safety net hospital for Dallas County, but a lot of our patients don't necessarily have robust internet access. Can't do streaming online telehealth visits. And then a lot of patients who are elderly or otherwise have lower tech literacy, and so they're not very facile with a lot of the technical aspects of this. So, is this a problem that you run across or thought about? And what have you guys done or what are you thinking about doing to address it?

Dr. Kannan Muth...: 07:31 Absolutely Sandeep, it's such an important question. This is something that people have described as a digital tech divide or gulf, where people who could use this infrastructure the most, then be supported the most by it. A population that perhaps is burdened by a lot of comorbidities and would benefit the most by not coming into the hospital during the COVID era, because they're at the highest risk for contracting the disease and ultimately suffering from it, is also the population that has the least support to avail themselves of telemedicine. We talk about Apple watches or other devices that can help us take care of a patient remotely. Being able to use a video to at least have some type of proxy for physical examination. But some of these things people just don't have. If you don't have a data plan, if you don't have a smartphone, you're not able to avail yourself with these things.

S, I think this is a big problem, where we're stuck in this paradox. We have this conundrum where the patients who need telehealth the most, we're least able to deliver it to them. And so, I think as a society, we want to address this. So, I have a lot of concerns about this motion towards telehealth, creating greater rather than fewer gaps in health equity. And I think that's something that we have to pay attention to.

Dr. Sandeep Das: 08:46 Yeah, it's a tough situation, definitely. And Robin, I wonder if you could comment on the role of advanced practice providers in the developing new treatment paradigm?

Robin Fortman, ...: 08:57 Yeah. I think the advanced practice provider, really pre-COVID, was doing a lot of telemedicine. We most often do our own telephone follow-up following an appointment or following a hospitalization. I work primarily in heart failure, and a lot of medication optimization was done over the phone pre-COVID. And so, I feel like we're really eased ourselves into telemedicine visits pretty seamlessly. Our patients are used to us talking to them on the phone a lot in between those visits. And now what we're doing is a little hybrid. Some patients are coming for in-person visits, into the clinic. And others, we are still continuing to do telemedicine visits for a couple of reasons. One is that we do not want patients coming in unless they really need to. But also to really social distance our waiting area and our exam room area too. And I really see us doing this even in the future, once a COVID vaccine is available and people are able to get out more easily. I feel that there will still be a lot of APPs doing telephone follow-up, telemedicine visits and video visits.

Dr. Sandeep Das: 10:43 Yeah. It definitely seems like the ABPs at our institution have really risen to this challenge. And as you said, y'all are doing a lot of telephone interactions with the patients. So yeah, I think there's definitely an increased role for ABPs going forward. We definitely see that at our institution, and I think y'all are already used to interacting with patients by phone quite a bit. And so I think that that is a more natural step and change.

Kannan, I wonder if you could comment specifically on the kind of metrics that you're tracking, especially that may be virtual specific. Or how they may differ from the metrics you were tracking before.

Dr. Kannan Muth...: 11:22 Yes. Our institution is looking at this very closely. Some of the things that I'm intrigued by are, number one, what percent of our visits for different conditions are virtual versus follow-up? Especially as, here in Chicago, we get further away from the peak of this COVID pandemic, and we're returning closer to steady state, something that I hope continues. But also, starting to think about, what are the effectiveness metrics that we need to be looking at? Because that's really the harder question. And I don't know that there is a good answer, but some proxies for this that we're starting to examine are, for example, what percent of times we're seeing a patient are we changing an order? Or are we doing some clinical activity beyond the really necessary counseling work that goes on in any visit? Some metric that at least something is happening or changing may or may not be exact, but that's at least I think a start.

And then of course, the more long-term metrics. Things like rehospitalization, mortality, but those are things that take a longer time to really assess out whether or not these visits are truly effective.

And then the last dimension, which really is a really important one, I think is patient satisfaction and experience. I think for us here in downtown Chicago, not having to come downtown, navigate traffic, parking, and being able to do these visits from the convenience of one's home, I think really helps the patient experience. And also, challenges us to, why have a once a every three-month appointment, if you can just have a quick five minute chat once a month? So I think it's going to change a lot of things.

Dr. Sandeep Das: 12:53 Are you having more frequent interactions with your patients, do you think, now than you used to?

Dr. Kannan Muth...: 12:57 Yeah. So one anecdote, I have twin girls that are six and, if I had a patient that I need to talk to, not that this is an everyday thing, but if I need to talk to them, I'll say, "Yeah, let's schedule a telehealth visit for 8:00," after the kids go to bed. That's not something that you can do routinely. So in some ways, it's a blessing and a curse, this whole digital connectivity we now all experience. But in many ways, I think, it offers flexibility for both the patient and the provider in a way that I think can really help support and drive better care.

Dr. Sandeep Das: 13:31 Do you guys have any formal methods of trying to assess patient preferences in this case, or you just offer them telehealth and they accept or decline on a one-off basis?

Dr. Kannan Muth...: 13:42 We've started to build internal guidelines around who should be offered telehealth, who doesn't necessarily need telehealth. Some of those guidelines relate to, in the COVID era, individual risk for coming to campus. But also, ascertaining what the patient's need is for an in-person visit. So for example, we may prioritize heart failure patients to come in-person because the physical examination is so important. In contrast to post-myocardial infarction routine and STEMI patients may be better off with telehealth. It doesn't seem to lend itself to distilling down to a discrete algorithm. It seems to be, you've got these factors on one side, and you've got these other factors on the other side, how does it balance out for the individual patient?

Dr. Sandeep Das: 14:29 Yeah, I think that, as always, the devil's in the details. The implementation nuance is challenging. I'm intrigued by the comment that specific types of visits are more amenable, and heart failure, which is where you guys live, is obviously, probably one of the less amenable to virtualization, just because the physical exam is such a dominant component in assessing serial volume status. So do you think that in the future, we're going to end up making certain things like pre-op evaluations, et cetera, essentially far more likely to be virtual, why other things, heart failure follow-up, to be more likely to be in-person?

Dr. Kannan Muth...: 15:07 I think so. And building on that, it really seems that there is an interesting thing that happens with patients once they enter the cardiovascular space. A lot of times patients come into the hospital seeing a general cardiologist or a generalist of some sort, and there they really seem to want that in-person interaction to build that trust. And then, once someone is referred on to a sub-specialist or sub-sub-specialists within cardiology, for example, an interventionist to open a CTO or to

get a stent. Or an EP physician for an AFib ablation. Or even just a conversation around atrial fibrillation ablation, seems at that point, "Okay, I've already seen the cardiologist. I already know the center. I trust the cardiologist, and therefore I trust the cardiologist's referral within the discipline," that secondary referral within the space, it seems like patients are very happy to have that as a telemedicine referral.

So what we may be seeing, I don't want to use this word stratification, but maybe a differentiation between generalist cardiologists, people like me who really thrive and love that general cardiology patient practice, and sub-specialty cardiologists who are often more procedurally based, where that secondary discussion is very amenable to a televisit conversation, because there's already been a physical exam. There's already been some vetting that this is an appropriate next step.

Dr. Sandeep Das: 16:36 That's interesting, and I wonder if you could comment on the impact of virtualization on things like wait times, referral times, things like that.

Dr. Kannan Muth...: 16:44 Yeah. It's a little hard at this point to disentangle from the fact that many patients are avoiding seeking health care in the COVID era. We're seeing those volumes come back. I think part of it has been that our wait times have improved. Our access to clinics like our APP-driven heart failure discharge clinics is better. It's hard to know how much of that is actually because of increased availability because of telemedicine, or because people are avoiding care. But I suspect in the future, if we can appropriately support providers so that telemedicine isn't just one more thing tacked on to everything that someone's already doing in their day, then I think it will improve access and wait times because it will offer flexibility. Clinics won't have to build new clinic rooms necessarily [inaudible 00:17:32] accommodate more volume. So throughput can increase somewhat independent of the physical built environment to the healthcare system. It will improve things, but that has to be coupled with the appropriate support and incentives for providers to be able to expand offerings.

Dr. Sandeep Das: 17:47 Thanks. Since the key focus of this podcast is on quality improvement in the time of COVID, I'm wondering if you have any insights to offer from your perspective as a frontline clinician here, for things that we can do to improve the quality of care we're delivering in the current environment.

Dr. Kannan Muth...: 18:03 Yeah. I think the frequency of visits is really an important thing. And seeing the provider more often or touching base even by telephone or a televisit more often, can help people support. Especially what we know about things like adult learning and how people think and process information. This model of, "Okay, here's a chunk of information we're going to give you in the hospital. 60 minutes of heart failure education. 60 minutes about your MI. 30 minutes in the office every six months about your MI." Well, what if that turned into five minutes every month? "Hey, this is a little nugget to learn about eating healthy. Here's another nugget on exercise." Those types of things, I think that is something that telemedicine, we can really leverage.

Dr. Sandeep Das: 18:46 One specific thing that I rely on in my regular practice really a lot, my face-to-face practice, is the after-visit summary. So, as sort of the cherry on top of the sundae of the office visit, I tend to go over instructions with the patient directly, and then type them into the after-visit summary printed out. Hand it to them as they walk out the door. I've felt a lot less confident in the virtual care era when I'm just saying things over the video. It always is the thought in the back of my mind, that as soon as I hang up, they're going to have no memory of what I just said. And we do mail them these after-visit summaries, but it doesn't feel like it's the same thing. Does that resonate with your clinical experience? Is there anything that you guys are doing to improve the patient retention of what happened in the visit that was virtual with no paper component.

Dr. Kannan Muth...: 19:40 Yeah, I think that resonates. We enter the information in the EMR for the after-visit summary, patients have access to it digitally online, and also can get paper copies of it. But it doesn't feel as tangible as printing it out. I know Robin prints it out, highlights it, the patient has it. It's stapled. It's a document that patients live and breathe. I've never seen a patient lose their after-visit summary. It'll come back to you in clinic, coffee stains on it, folded up crumpled, but it's always there. And that record, this is just another reminder of how we really are embodied individuals and not everything can be virtual. So, I share your concerns about not having this physical reminder of what was discussed in the office.

Dr. Sandeep Das: 20:30 Here's a perhaps provocative question for you here. Should patients be allowed to record their visits online and share it with their friends or family, or be able to look at it later?

Dr. Kannan Muth...: 20:42 I think they should. I think that coupled with that, we also have to understand that not everything that is said out loud versus typed, versus vetted or peer-reviewed, is perfect the first time. So I think we have to also build an expectation that look, when we're speaking, what comes out may not be precisely what is meant in that moment. I think if anyone looks at a transcript of how they actually speak day-to-day, they would be completely horrified. So I think so long as we build that expectation that, hey, rely on the written, vetted document, over what comes out in natural speech, I think that is reasonable.

The next level of that is, should patients have open access to hospital notes and things like that? Also, it's a challenging question, because it is patient information that ultimately patients have access to, but also the way we write to each other, to nurses, APPs, is very different than how we would discuss something directly to a patient. So I think that might require a little more careful thought, thinking about what written documentation in real time is accessible to patients, versus what is accessible to patients after going through medical records and things like that. But it's a great question. I think we're moving pretty quickly to something like that.

Dr. Sandeep Das: 22:08 Fantastic discussion. I'm wondering if you guys have any parting thoughts that you want to leave our listeners with?

Robin Fortman, ...: 22:15 The pandemic really pushed us to change the way we deliver care, and in some ways those telemedicine visits that we've created are very valuable. Valuable in finding what medication bottles does this patient actually have in their home? Read them off all to us. And including, there's some visits we've done with two other family members on the line who would have never been able to come with the patient in the office. So, I feel like it's pushed us in a way that, I don't want to lose those types of visits, and just determining what's the best for each patient as far as how that visit with them will look like in the future.

Dr. Sandeep Das: 23:12 That's great. I love the optimism in your tone there and the way you're looking at the way we're delivering care now.

So Kannan, what are your key take-home points that you want your listeners to remember after this conversation?

Dr. Kannan Muth...: 23:24 Yeah, so key take-homes. I think, number one, we have an opportunity to reshape care and reach people where they're at. Number two, let's not lose sight of the fact that there is profound value to connecting with people personally. And

		number three, we have to figure out a way to balance those two things and be able to reach out to people wherever they are, but at the same time, bring them into where we are, and therefore be able to deliver better care for them.
Dr. Sandeep Das:	23:52	Thanks guys for a great discussion. It really struck me how similar things that you describe at Northwestern are to things that we're seeing in Dallas, and I bet that means that it's similar to a lot of cities and institutions across the country. I do think that the COVID pandemic has caused a pretty massive paradigm shift in how we deliver care. And I agree with Kannan's point that, it's very difficult to disentangle our response to the virus from our other response to the changes in the paradigm of care. But I'm very interested to see what persists on the other side. I really liked Robin's optimism that we can capture the good things from this, and not lose them in the post-COVID era. And I do think that there's things that we can learn and go forward. So, I think that there's a lot of interesting observations here that we can reflect on and incorporate it into our own practices. So thanks again for coming.
Dr. Kannan Muth...:	24:47	Thank you, Sandeep.
Robin Fortman, ...:	24:48	Thank you.
Speaker 1:	24:48	Quality Improvement In the Time of COVID-19 is brought to you by the American Heart Association with support from Novartis Pharmaceuticals. The views expressed in this podcast do not necessarily reflect the official policy or position of the American Heart Association. For transcripts of this podcast and more information on the Association's COVID-19 CBD registry, powered by Get With the Guidelines, visit us at heart.org/covidregistry.