Transcript Details
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KDIGO Conversations in Nephrology: How to Develop an Acute Dialysis Care Quality Program - Quality Metrics and Continuous Improvement

Announcer:
Welcome to KDIGO Conversations in Nephrology. This episode is titled "How to Develop an Acute Dialysis Care Quality Program: Quality Metrics and Continuous Improvement."

Here's your host, Dr. Ravi Mehta.

Dr. Mehta:
Developing an acute dialysis care quality program is an essential part to improve patient management.

Hello, and welcome to *KDIGO: Conversations in Nephrology*. I'm Dr. Ravi Mehta, Professor of Medicine at the University of California, San Diego. And joining me to talk about developing acute dialysis care quality programs is Theresa Mottes, pediatric nurse practitioner at Ann and Robert Lurie Children's Hospital in Chicago.

Welcome to the program.

Ms. Mottes:
Thank you. It's an honor to be here talking about quality improvement [QI].

Dr. Mehta:
Theresa, to start, why is quality improvement needed for an acute dialysis program?

Ms. Mottes:
I think answering the question "Why?" is always the best place to start. And in order to answer the question "Why?" – Why is it important for us to look at it? Why as providers and caregivers do we care about quality improvement? And I think we can look to other healthcare programs, non-healthcare programs to sort of understand that. We can look to our colleagues who are studying cardiopulmonary resuscitation QI work. Why do they care about the timing of the very first shock from an AED? Why do they care about how long it took the team to arrive? Why are they studying the depths of compressions? It's because the outcome of that cardiac arrest event is about more than just getting people to the bedside; it's about what happens at the bedside.

Non-healthcare, we can look to racing. Why do they focus so much energy studying, practicing, and understanding what happens in the pit with the pit crew? Because they know the outcome of that race is influenced by what happens in the pit. So we need to start thinking about what we do and how does that influence the outcome?

What we do know about delivering acute dialysis care is that it's complex, it's technical, the patients are very dynamic and ever-changing, but we also know that every one of us is doing it a little bit different. It's clear in the literature that practice variation is associated with poor outcomes. But practice variation also limits our ability to understand that how we're delivering the care, what we're doing when we're prescribing and delivering the care at the bedside influences the outcome. It also limits our ability to be able to say, "These are the best practices that we should all be doing with the best outcomes." So whether you're a neonatal, an adult, or a pediatric acute dialysis program, you need to think about applying quality improvement methodologies that include the standardization of practice, measuring and analyzing quality improvement indicators, identifying areas or processes that we could do better. Because that's when we'll have a better understanding about how we're caring for patients and how that impacts the patient's outcome.

Dr. Mehta:

Theresa, thank you for pointing out how these high-performance organizations look at quality improvement. If you were to think about this for acute dialysis, what are the key components and what would be 3 common indicators that could be used? And more importantly, could you tell us a little bit about your program?

Ms. Mottes:
I think when you're getting started with quality improvement program, it's really 2-fold. First, it's determining your programmatic pieces of your acute dialysis program. So that means the structure. The who, the what, the where, the process, the when, and the how, and the outcome; what was the impact? The second piece of getting started is connecting those programmatic pieces to quality indicators. You need them to be both overarching, so looking at your program, but also to be relatively modality-specific.

For example, you wnt to have a quality indicator that's measuring your process for acute peritoneal dialysis or hemodialysis. And specifically, what are the best quality indicators, measures – or how do we evaluate the care? The best quality indicators are relevant, they're easy to obtain, they're easy to analyze, and they focus on the patient. They also have three common characteristics. They focus on safety, ensuring we do no harm; they focus on efficacy, ensuring that we're delivering what's prescribed; and they focus on outcome, how all of that influences the endpoint.

An example of a quality indicator for acute programs is filter life. It applies to – I'll often think of it as associated with the CRRT [continuous renal replacement therapy] but it applies to PIRRT [prolonged intermittent renal replacement therapy]; it applies to SLED [sustained low-efficiency dialysis]; it applies to HD [hemodialysis]. Because you want to get the maximum life filter. So you want to make sure that you're getting the right amount of filter time. It's fairly easy. It's fairly simple to collect; it's well-described in the literature. There is benchmarking data that's available. It focuses on safety, preventing blood loss, ensuring that staff are well educated and comfortable providing this care. It focuses on efficacy, timely starts, measuring interruptions, trying to prevent interruptions, and it focuses on outcomes, reducing complications, ensuring that the patient's getting the delivered dose.

And specifically, to my particular quality improvement program, some of the characteristics of our program is that we truly believe that quality improvement in acute dialysis is multidisciplinary, or interdisciplinary, as well. And so we have members from our lab, our pharmacy, our dietician, physical therapy, social work, physicians and nurses from both disciplines, critical care and nephrology. We capture routinely about 10 quality indicators that are very specific to how we're delivering care. So we specifically look at time from ordered to time to start so that we can understand where those delays are. We look at solution usage. Our committee meets once a month, and we look at the overarching data, our activity data, our specific outliers once a month. But then quarterly, we present our dashboard to all key stakeholders, so all of critical care, all of nephrology, all of pharmacy. We've been doing quality improvement for about 10 years, and we have adapted over time. We've certainly used indicators to adjust certain things. We've dropped indicators that were no longer meaningful for us. And so our program just continues to grow, but also continues to modify.

Dr. Mehta:
Thank you, Theresa.

For those just tuning in, you're listening to *KDIGO: Conversations in Nephrology*. Today's episode is on how to develop an acute dialysis quality program, quality metrics, and continuous improvement. I'm Dr. Ravi Mehta, and here with me is Theresa Mottes.

So, Theresa, how did your quality program fare in the pandemic and what did you have to do?

Ms. Mottes:
So I think the biggest impact that the pandemic had on our quality improvement was very similar to what hospitals were thinking about and having to do. It was about resource allocation. So just like in the hospital, they shifted resources to the areas of greater need. We used that same approach to our quality improvement program. We focused on the things which became necessary to manage in difficult times. So we focused on filter life because maximizing filter life decreased the number of filters that we were using, which made more available for more patients. Decrease the amount of person out-times, setting up and tearing down and restarting. We also focused on fluid management. Because we believe that if we manage their fluid status well, we're delivering high effective care and may be able to transition them to a different modality. We also really evaluated what modalities we had available and what we would need to ensure that during this crisis, we would be able to deliver high-quality care. And what we found was that having this robust quality improvement program already in place helped us manage through the crisis, manage through these difficult times. Our quality improvement program helped us identify the areas of need and helped us know how to shift those resources so that we could still provide high-quality care.

Dr. Mehta:
That's terrific. So before we close, can you share what are the keys to the success of a CRRT quality program? What are the optimal ways to appropriately create a QI yardstick for acute dialysis? And how are these goals created so that they are realistic?

Ms. Mottes:
I think I'll tackle the yardstick question first, because I think at this time, creating a QI yardstick may be a little bit early. In order to establish realistic goals, that requires us to know our data, not just internally but externally. And I don't know that we have enough data to set global or institutional goals. So we need to start with – that yardstick, needs to be comparing yourself to yourself.

The other piece of the yardstick is really understanding where are the resources? What can you use to help you build your program and start identifying your own yardstick? ADQI [Acute Disease Quality Initiative] – ADQI's done a ton of work and has a ton of resources and tools and publications that you can refer to. KDIGO, as well. So these are all these projects and missions out there that we can use to develop our internal tools. And then it's about doing collaborative studies. And then we will be able to establish that larger QI yardstick.

And I think this will become a little bit easier as an advancement in the technology that we are using. The electronic medical record, the newer dialysis machines, dedicated QI software, improves our ability to collect, extract, and analyze, and display data. So this allows us, again, to shift our resources to actually doing interventions and measuring outcomes.

And to end with the successful quality improvement program, I think a successful quality improvement program brings about substantial, lasting, positive change that ultimately improves the care that we deliver to our patients. The keys to success are dedicated resources, engaged representatives from all disciplines. Anybody who has their hands in the bucket of care needs to be a part of your quality improvement program. And you have to have a culture of safety. You have to be willing to unapologetically look at your own data, find your own gaps, create your own interventions, because that's where it starts. It starts with local and then expands to regional and then expands further than that. That's how we ensure that we are delivering the best possible care, regardless of what institution. That's the foundation of QI work.

Dr. Mehta:
Well, that's all we have time for today. I want to thank our audience for listening in and thank you, Theresa, for joining me and for sharing all of your valuable insights. It was a pleasure speaking with you.

Ms. Mottes:
Thank you so much. I really enjoyed it.

Dr. Mehta:
I'm Dr. Ravi Mehta. To access this and other episodes in our series, visit KDIGO.org/podcasts. Thanks for listening.

Announcer:
This episode of KDIGO Conversation in Nephrology was provided by KDIGO and supported by Baxter Healthcare.