Health Information Technology's Role in Quality Improvement for Clinical Education

Alicia Sutton:
Quality improvement eduction. It’s a rapidly expanding focus of education that brings in the interdisciplinary team. So how does Health IT or health information technology improve? What can we expect to see coming down the pike on Health IT that might make a difference in how learning is accomplished? We’re going to talk about that today. And I’m your host, Alicia Sutton. Today I’m talking to Dr. Joe Kim, President of MCM Education, a physician himself, and someone who has expertise in Health IT. welcome, Joe. We’re glad you could join us.

Dr. Joe Kim:
Thanks for having me here. It’s a pleasure.

Alicia Sutton:
This series obviously is talking about life-long learning and we’ve been focusing a lot on quality improvement education. And if I could just start first with kind of your opinion of what quality improvement education is, and then we’ll get into some of the Health IT aspects that can help us move forward in the quality improvement measurement.

Dr. Joe Kim:
Some of the trends that we are observing, and noticing in the community especially, is that many healthcare professionals never really received any formal training in quality improvement or QI. So we realize that there are many needs as it relates to their understanding just of QI principles. How do they actually assess their own performance? Do they even know how they’re performing? And then based on that information, that data, do they know how to then change processes in an effective way as a team, because most of these changes need to occur in a team setting, and how do they actually go about doing it?

And so there’s a lot of cultural issues within the organization, there are process issues that some centers are much better than others at because they’ve got standing meetings and they’ve got these things in place. But for many of them it’s really just a matter of taking a step back, applying some very common sense principles, and then see what they can do to actually change things internally to then improve the quality of care that they’re delivering.

Alicia Sutton:
It does sound very much like a paradigm shift, without trying to sound dramatic about it, but it is a paradigm shift. We were measuring kind of the individual on performance improvement. Now we’re really looking at a system.

Dr. Joe Kim:
It is. I find that there are certain places in the country where clinicians are really accustomed to working in teams. They’re very much engrossed in this sort of system-based culture, and unfortunately there are still many parts of the country where physicians especially work in silos. And so they are just responsible for their own tasks, and they’re writing orders and they’re expecting other members of the team to do what they need to do. But they’re not necessarily embracing or understanding that whole team-based dynamic. And this is part of the reason why the AMA and a bunch of medical schools are really trying to start teaching and-ingraining that team-based education and leadership into the medical school curriculum because traditionally it was never there.

So I think the groups of clinicians that understand how team-based care can work and how they can make that more effective, I think they are the ones really at the leading edge, delivering better care and also being much more efficient while they’re doing that.

Alicia Sutton:
And the team obviously includes the patient. We know we have to bring the patient in. So let’s talk a little bit about Health IT and your experiences in that area are impacting both the provider and the patient in looking at their data.
Dr. Joe Kim:

Yeah, I think when it comes to the patient, one of the buzz words obviously is patient engagement. You know, what does that really mean? Is it simply them having access to their records and being educated about their disease state and knowing how to better manage their condition, or is it beyond that? And I think it is much beyond that. I think that there are places where the patients have had access to their health record or Personal Health Record or PHR, some places call it a patient portal. And so they've had access to that information for a long time, and they're comfortable sharing that information with other members of their family or close friends.

And then of course there are other patients where it's all traditionally just been paper based. They never really had access to their records unless they asked for it, and then they often had to wait a long time to even get it. So I think when it comes to patient engagement, all the meaningful use requirements have really been pushing both hospitals and providers to make sure that patients have access to their fundamental core information, like their records and being able to schedule appointments and get refills for their medications and so forth.

But I truly believe that as patients gain access to their information and understand what is clinically relevant, and then as they have the ability to share that with other members of their personal care team, like family members and close friends, that ultimately they will become more engaged because people will be asking them, so how are you doing with your diabetes control? Or, how are you doing with your blood pressure management? And they're going to have a level of social accountability, they're going to be reminded on a more constant basis, and it's not just when they sit down in front of their computer. Many of these patient portals are now available on mobile devices. And so they're constantly carrying that information with them all the time, and hence being reminded constantly and being engaged in improving the management of their condition.

Alicia Sutton:

Well, affordable care certainly has brought us to the brink of having the data there and capturing the data. Are we at the stage now where clinicians can encourage or should be encouraging their patients to go ahead and get that data? Get access to it, take a good look at it, come to the appointments with questions already? Or, do we need to push that a little bit more?

Dr. Joe Kim:

Yeah, it's a big challenge because I think there are some who believe that their patients will understand the information and know sort of what to pick in terms of understanding what's relevant and important. And then of course there's always the time barrier, because the minute you get, for instance, your lab reports, there may be some abnormal lab results. But they may be clinically insignificant. But patients
don't necessarily understand that or know what that mean, to now have to spend all that time sitting
down and explaining to them why certain things may appear to be abnormal, but why it doesn't
necessarily require further testing. That takes more time, it takes more education.

We are at a point right now where it's a challenge both ways. We do want patients to know, for
instance, what was your last A1C and what is that goal level that we're trying to get to, and how can we
get you there? But at the same time, we don't want them coming in flagging and highlighting all the
abnormal lab values that may be completely clinically insignificant and then having them then demand
additional testing and just follow-up care. It's still not completely clear cut. It's certainly not a cookie
cutter approach by any means.

Alicia Sutton:
Absolutely. It takes some time and effort to bring it into the circle there of patient care. As a physician
yourself, and obviously you are a patient at some point in your life, tell us about some of the more cool
technology tools that you've looked at and seen and tested that help people stay on track of their data.

Dr. Joe Kim:
I think right now one of the big trends that I have seen and have been able to personally experience are
technologies for instance like the wearables, you know, these activity trackers, these fitness monitors,
so to speak. And there are a bunch of them, some that you clip on your pocket, some that you wear on
your wrist, and as I've talked to people who've used these, I've found a couple of things.

One is that you're constantly being reminded to move because they say that sitting around, especially
for hours and hours a day, is really contributing heavily, much more than we ever thought, to not just
the inactivity and people being overweight and so forth, but that it has other metabolic implications. And
so just to be reminded to get up every hour, for instance, and to take a walk around the office.

So these activity trackers I think are not just for the fitness enthusiasts. It's really being used, and I think
more so than ever, with a much broader audience of people just to help them be more aware of their
level of physical activity, and what they're eating, and how much they've moving around.

And then of course there are disease specific mobile apps, for instance, and even gadgets that you can
clip onto your smart phone for instance, not only just measure your heart rate but actually can give you
an EKG reading. And in some cases you can actually transmit that EKG reading to a cardiologist.
Patients who have, for instance, cardiac arrhythmias like atrial fibrillation, are being prescribed some of
these devices that are in the case of like the EKG monitor, you know, FDA approved as a medical
device, and they can check it.

So we've heard of many cases, for instance, where a patient say yeah, I get these palpitations in the
middle of the night, not really sure what it means. And then of course the workup often then requires testing in the lab, Holter monitors, what have you. But now we actually have very low cost tools like this.

Other tools that I've seen are tools that enable parents to actually provide more data when their child is sick. So instead of just saying, yeah, my 2-year-old has a fever and a rash, they can take pictures of the rash, in some cases they can magnify the picture. They could even scan that infant or the baby to know what is the baby's heart rate, what is the baby's oxygen saturation level. And all that information gets picked up on a little gadget, and once again gets transmitted to the provider on the other end of the phone call who now has objective data. They can see the O2 sat, they can see the respiration rate, the heart rate.

They've got access to so much more information than they've ever had before. So I think we are at a convergence point, and as patients are going to be able to understand how to use these tools, that really will make care delivery much more efficient.

Alicia Sutton:
If you're just joining us, you're listening to ReachMD, the channel for medical professionals. I'm Alicia Sutton, and we're speaking with Dr. Joe Kim about Health IT and other ways that we can improve quality across the board. So Joe, you've given us some great insights into apps out there. Are there some online resources that our listeners can go to, where they can think about what apps to recommend to their patients?

Dr. Joe Kim:
Well, there are a number of sites right now that evaluate apps for the healthcare providers. But these apps continually change, and right now there are only a very small number of them that are being regulated by the FDA as a medical device. I think the stronger suggestion is that if you're treating patients with a certain disease state, for instance hypertension or diabetes, the more common ones, if you go to those disease association websites or in many cases the patient advocacy groups, that they have developed tools and toolkits and apps as resources for their patients. So I think in many ways recommending those are helpful.

Certainly the patient communities, the online patient communities, are discussing how they're using apps beyond just the general generic symptom checker or the general sort of health information apps so to speak. So I think it's important to just hone in on, you know, what are the needs of the patient, how sophisticated are they in terms of using technology, what is their comfort level, and then get feedback from them and hear from the broader community. Do some crowd sourcing if you will to see what is being used and how effective are those apps, and how is it actually changing patient behavior
and getting them more engaged?

Alicia Sutton:
As an educator yourself with a company that offers medical education, are you seeing a shift in how technology is coming into education itself and the way we’re delivering education, to focus on quality improvement?

Dr. Joe Kim:
There’s certainly been a shift with more physicians, nurses, and other providers being comfortable with mobile devices, tablets, and smart phones, just to consume the information to get reminders, not necessarily to watch an hour-long lecture on a small screen. I think one of the areas where it’s really being used heavily for quality improvement is in that space of clinical decision support or CDS. Every electronic health record now offers some level of clinical decision support. It may be very, very basic like so and so, your patient has a drug allergy so you shouldn't prescribe that drug, all the way to more sophisticated, here are the latest clinical guidelines on what you should do next or what should be prescribed next. If the patient has failed these two therapies, here's third line recommendations. So I think it really gets more sophisticated.

I think the other example is that there are hospitals and organizations using some of the online social collaboration tools within their institution. So now they're providing team-based care, not just in a face-to-face setting with the nurses and the dieticians and the pharmacists, but they can actually coordinate that online in an asynchronous fashion. They're using tools that in some ways mimic what we might see on regular social media platforms or other just online collaboration platforms, but it allows members of the care team to manage a patient asynchronously, and then to provide feedback on what ought to be done next,. They can see expert consultation reports or suggestions from the dietician, for instance.

And so all of that information now being readily available, and not needing someone to go and track it down or chase it down. In some cases even making that information or pieces of that information available to the patient is also improving the efficiency of how care is delivered, and ultimately improving quality.

Alicia Sutton:
And are you seeing this asynchronous care across all settings? Are you seeing it in small practice, or obviously all the way up to the ACOs in the larger institutions?

Dr. Joe Kim:
I think we’re seeing most of that where the disease state does require more of that team-based approach, and of course there are some diseases, like for instance probably the classic example are a
lot of these complex cancers where you've got surgeons and radiologists and in some cases pulmonologists or other specialists, providing care. And then on top of that you have nutritionists and then pharmacists and others who are providing counseling and education.

So I think it's in those examples where you have that comprehensive approach. Diabetes is another great example where you've got the whole nutrition component and the exercise component, in addition to the medication management components. I think those are examples where you now have teams of clinicians who can care for patients much more efficiently because it's not all just face-to-face interactions any more. And I think that's where we're seeing a lot of this really taking off.

Alicia Sutton:
So Joe as we wrap up, where do you think we're heading? What's your crystal ball picture of where we'll be in three to five years from now?

Dr. Joe Kim:
One of the major trends that we're observing is that instead of just focusing on traditional CME, Continued Medical Education, and just getting that latest scientific information to know what is the latest guideline or what got presented at the scientific conference, that education is now going to shift towards focus on things like process improvement, very basic core and fundamental, common sense applications. We've seen, for instance, many hospitals embrace Lean and Six Sigma principles. We've seen more and more interest around just basic concepts that are being applied, for instance, in manufacturing or in other industries of problem-solving, of reducing defects and errors, of eliminating waste. We're going to see more education emphasis around those principles and ideas.

I think another thing that we're going to see are that these clinicians are going to be forced in some ways to work as teams, and we're seeing that trend as hospitals are acquiring physician practices, for instance, or as these various healthcare delivery models and payment models change from fee for service to value based. So I think in that sense there are culture shifts occurring, and they're being forced to meet and to evaluate how they're performing as a team. They're being forced to evaluate, you know, how do we communicate, and how can we make this better?

I think it's forcing things like new processes to get introduced. And so as organizations, as systems work through all of this, we're going to see a lot of growth pains, we're going to see a lot of challenges. But at the same time we're going to see great examples of what works, examples of innovation, examples of best practices that are then going to be disseminated and applied. So I think that's what's going to be exciting and interesting.

The other thing that we're going to see is that health information is going to be much more readily
accessible because hospitals now have an electronic health record so they've implemented stage one meaningful use. But now it's the next step. How do we make this information more sharable, and how do we make access to the information more meaningful? And how can we use this information and apply analytics? So it's sort of that next stage that we're going to start seeing over the next three to five years that will ultimately improve care delivery, and I think that's then going to show the providers, especially, that okay, even though it takes a lot of time to enter this information, and even though it was painful to go through the transition and implementation stages, that all of the analytics and the data that we're now getting is actually clinically meaningful and it's useful. And I think it's going to motivate them to provide better care.

Alicia Sutton:
Sounds like we have a lot to look forward to. Thank you, Joe. We greatly appreciate your time, and thanks for being with us.

Dr. Joe Kim:
Thanks for having me here. It was a pleasure.

Alicia Sutton:
This is Alicia Sutton, and you've been listening to Lifelong Learning on ReachMD. I've been talking to Dr. Joe Kim. Joe is an expert on Health IT, a physician himself, and President of a medical education company. To download this segment, go to reachmd.com, or download the podcast on the ReachMD mobile app. Thanks for joining us today.